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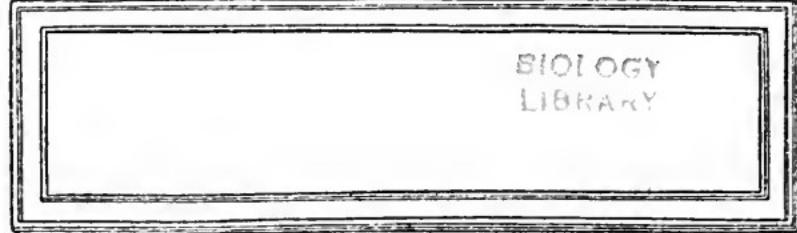
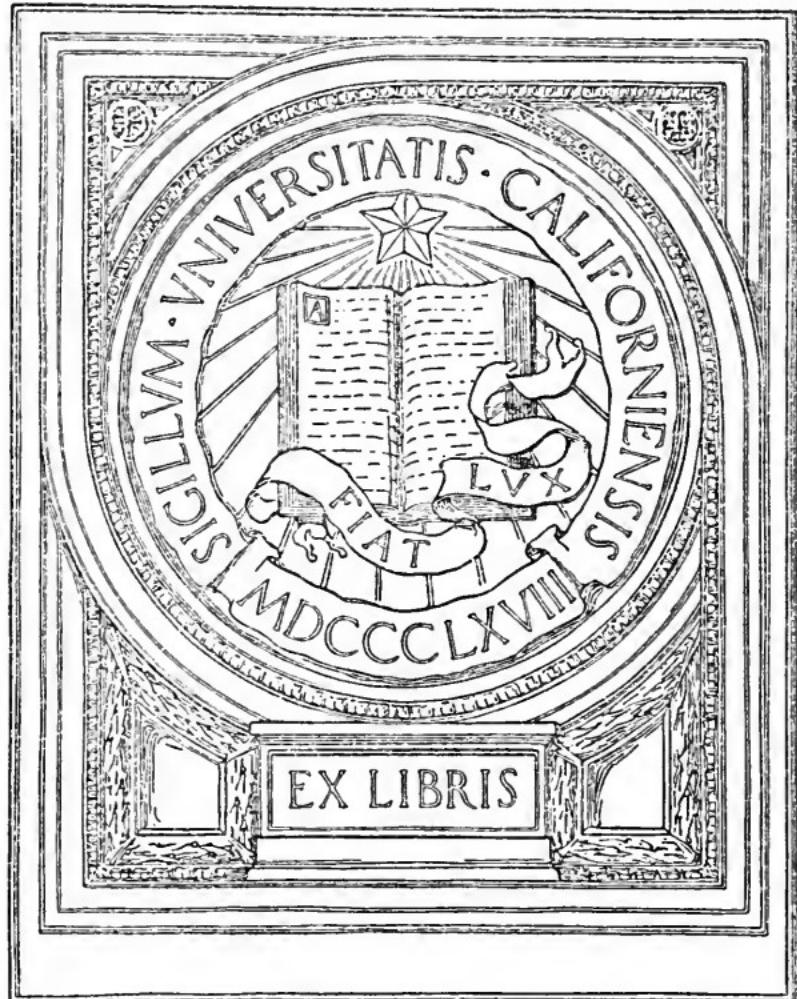
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LITTLE'S  
OF  
HORSES

F · T · BARTON

GIFT OF  
A. F. Morrison





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# The Ailments

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## Of Horses.

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BY

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New York:  
BRENTANO'S.

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TO MARY  
AMANDA

# THE AILMENTS OF HORSES.

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## A

**Abscess.**—This is an accumulation of matter, either pus-like or watery in character, whilst its formation is the result of a direct or indirect injury; less frequently through blood-poisoning, in which case the formation of matter commonly takes place both internally and externally, bringing about grave constitutional disturbance. The collection of matter forming under the jaw during the ordinary form of strangles is simply an abscess, and requires but the treatment prescribed for any other boil. In the last-named disease we believe that it is of a specific nature.

Very large abscesses are quite common in the horse.

The point of the shoulder is not an uncommon place for an abscess to make its appearance, especially in colts.

An abscess in connexion with the brain or heart is most certainly fatal.

**Symptoms.**—A gradual increase in size (if externally), accompanied by heat, tenderness, and, in the later stages, a throbbing sensation imparted to the finger when placed over the seat of disease. Later on,

the skin “bits” on pressure, and takes on a soddened feel beneath.

Internal abscesses give rise to pain and exhaustion. When about the brain the horse presses its head against the wall, manger, &c.

A watery (serous) abscess is well seen during the outset of poll-evil and fistulous withers. Such may appear upon any part of the body.

**Treatment.**—Warm fomentations, and when the abscess is mature, cut it open at the lowest part, so that the matter will drain freely away.

Keep the wound open for a few days by the insertion of a bit of tow, and wash the sac out with a little weak antiseptic solution. The wound can now be allowed to heal itself, of course after the removal of the tow.

A serous abscess does not require, unless at the poll or withers, any fomenting. Its contents must be given free exit through the use of the knife.

During strangles good and extra food is called for.

House the animals.

**Amaurosis, or glass-eye.**—As the name implies, the eye or eyes assume a glassy appearance.

It is the result of paralysis of the nerve or nerves of sight. It may be temporary or permanent.

**Angle-berries.** *See Warts.*

**Anus, protrusion of.**—This is not an uncommon accident. It is denoted by the protrusion of the red membrane of the

anus, forming a tumour under the root of the tail. Dry food and severe straining act as excitants towards its production. It may become strangulated, and then it assumes a blackish appearance.

**Treatment.**—Cleanse the part, then try and return it, subsequently smearing with gallic acid ointment. Soft food must be the order.

**N.B.**—The protrusion must not be mistaken for a polypoid (stalked) tumour.

**Anthrax.**—This is a germ disease, being caused by an organism circulating in the blood.

The germ is known as the Anthrax Bacterium (*pl. Bacteria*). It is extremely minute in size, requiring high powers of the microscope for the demonstration of the same.

In shape it is like that of a short rod, with square or notched ends.

Its methods of multiplication are by the rod breaking across (transverse fission), or else by forming spores in the interior of the chain-like length. The latter usually happens outside the body. These organisms give rise to deadly excretions, which cause, as a rule, the rapid death of their host.

In the horse anthrax is not at all common in this country, but either the same, or another disease very closely allied to it, is common at the Cape, where it bears the name “Cape Horse Sickness.” A horse which has been fortunate enough to recover from this malady is known as

“salted,” *i.e.*, proof against the disease (acquired immunity).

Outbreaks of anthrax in the horse happen now and again, though chiefly in the fen-lands of Norfolk and Lincoln.

In cattle the disease is known as splenic apoplexy, and in them it is fairly common. The horse may get it from these animals, so may the human subject, dog, sheep, pig, rodents, &c.

In dealing with anthrax-stricken animals—living or dead—the utmost precautions have to be taken to guard against inoculation, as the disease is usually fatal to man, though not to the dog, fowl, &c.

In acute anthrax the animal may be seized whilst at work, succumbing to the attack within an hour or so.

Trembling from head to foot, violent pain in the belly and quick breathing, along with a small pulse, are the symptoms of most importance. The body rapidly decomposes after death. The diagnosis must rest upon the finding of the germs, for which work an expert microscopist is required.

Swelling of the head and tongue is commonly seen when the disease takes a slower course.

If suspected report the matter at once to the nearest local authority.

**Arsenic poisoning.** — Some horse-keepers have got into the pernicious habit of giving white arsenic (arsenious acid) to their horses about once a week, in the form of a powder, along with the animals' food.

The average dose of this poisonous drug is 3 grains, but these foolish fellows often give twenty times this amount. Continued for a long time, the "tolerance" of the drug enables the animal (like arsenic and opium eaters) to stand big doses, but as arsenic tends to accumulate in the cells of the liver, a fatal attack of arsenic poisoning (acute inflammation of the stomach and bowels) may happen at any moment, the blood-stream having swept the drug into the circulation.

As a rule the proprietor is at a loss to account for this sudden onset of disease, and the horsekeeper is not going to willingly sacrifice his situation, and perhaps incur criminal prosecution, if he can possibly avoid confession.

Analytical and veterinary experience may subsequently compel him to do so, or the plea may be established perhaps without voluntary statements on his part.

Grooms ought to be made aware of the consequences of drugging their horses without consulting their master.

**Symptoms.**—Violent pain in the belly ; purging or dysentery ; straining ; quick small pulse and shallow breathing ; sweating, redness of the eyes, and thirst.

**Treatment.**—This must be left in the hands of a duly qualified veterinary surgeon. The proper antidote is peroxide of iron, and morphia to calm the pain.

**Azoturia.**—This has been commonly termed nitrogenous urine, because it was thought the nitrogenous constituents of this liquid excretion were largely increased.

The disease comes on very suddenly, usually showing itself after the horse has been idle for a day or so, and then not until, as a rule, the animal comes out of the stable. It may be that it has only travelled a few yards.

**Symptoms.**—Partial or complete loss of control over the movements. Sometimes the animal falls before it can be got home.

The muscles of the haunch feel as hard as wood, and the animal is unable to rise.

The most important indicator of azoturia is, however, the colour of the urine. It soon becomes like coffee infusion without the milk.

A large number of horses die from this disease, especially when down. Recoveries are also frequent.

**Treatment.**—Dose of purgative medicine, and a clyster or two to assist the action of the purgative.

Stimulate the spine. Clothe the body, and keep a dry bed for the animal to lie on.

Veterinary aid is essential, because it is advisable to draw off the urine, and perhaps wash out the bladder.

Further, skilful treatment is very important in a malady so quickly fatal.

## B

**Back, broken.**—The back may be broken either through a fall, the fall of a heavy weight upon it, or during struggling, when the animal is cast in its stall. Disease of the bones predisposes towards

the occurrence of broken back. Paralysis, behind the seat of breakage, results.

**Bladder, inflammation of.**—Inflammation of the bladder is not a common affection by any means.

The cause, symptoms, and treatment are matters for the skill of the veterinary surgeon.

**Bladder, stone within.**—Calculi frequently occur in the bladder of both the mare and the horse. Such may or may not be formed in this situation. If the calculus is a small one, it is quite possible for it to be expelled during the act of urination.

The flow of urine may be either impeded or completely stopped, through stone blocking the outlet of the bladder, or lodging in some portion of the passage.

Removal of the stone or stones can be effected by operation (lithotomy).

**Blood-spavin.** *See Spavin.*

**Bog-spavin.** *See Spavin.*

**Bone-spavin.** *See Spavin.*

**Bot-fly.**—This fly is about during the months of May, June, July, and August. It deposits its egg upon the hairs of the horse, especially about the knees, anus, shoulders, &c.

By some not very well-understood means the larval stage of the fly gains an entry into the horse's stomach, and barrel-shaped larvae attach themselves to the gullet end of the stomach lining.

In the following spring these let go their hold, and pass out with the dung.

After a period of quiescence on the ground a full-blown fly emerges, ready to repeat perpetuation of the species.

The horse thus serves as an "intermediate" bearer.

**Bowels, inflammation of.**—This is, we regret to say, of too common occurrence in the horse. It is denoted by continuous pain, a hard, small, thready pulse, anxious expansion of countenance, dilated pupils, cold sweats, and general coldness of the body.

Rising, rolling, and kicking with pain are ever constant symptoms.

The covering of the bowels very often participates in the inflammation.

So far as we are aware it is always fatal, death occurring within 24 hours, or thereabout, from the onset of the pain. A common cause is that of parasites (worms), but "twist of the bowel," and "telescoping" of it, are frequently found after death.

It has been seen in anthrax, and through the ingestion of vegetable and mineral poisons.

**Bruises.**—These can be treated by the application of cooling lotions, or a plaster of fuller's earth, &c.

**Brushing.**—This is caused by striking the opposite limb with the inner side of the shoe.

The horse may fall through the pain inflicted.

Keep the foot narrow on the inner side, or use a three-quarter shoe. A boot can be put on.

**Bronchitis.**—Inflammation of the bronchial tubes is not uncommon ; in fact it often happens in influenza, though it does occur apart from this. It is either “acute” or “chronic.” The former often ends in the latter, whilst there is always an inclination—under the slightest provocation--for the last named to usher itself into the acute form.

The large, small, or medium-sized air-tubes may be affected.

When the smallest bronchial tubes are the main seat of the disease its gravity is increased.

Bronchitis may, if neglected, run on to inflammation of the lungs.

**Symptoms.**—In the acute form of the malady there is always a considerable amount of fever. The cough, at first hard and dry, is subsequently soft and moist. Pain is present.

The so-called mucous *râle* is an important indicator of bronchial inflammation

The mucous membranes of the eyes are of a bluish-pink colour.

Loss of appetite, confined bowels, and so forth are other minor symptoms.

Chronic bronchitis is denoted by a cough. It constitutes the so-called “chronic cough.”

**Treatment.**—Place the animal in a well-ventilated stable, and keep the temperature as near 60° F. as possible. Uniformity of stable temperature is one-half the battle in dealing with bronchitis in its acute stage.

Clothe the body, and put on a set of flannel bandages.

See that the bedding material is dry.

If the bowels are confined, add a few tablespoonfuls of linseed oil to bran mashes, scalded linseed and crushed oats, once daily.

Encourage the discharge from the nose by steaming the nasal passage twice daily.

Sometimes a seton placed in front of the chest does good.

Mustard paste, or some stimulating liniment—*e.g.* camphorated oil—should be well rubbed over the throat and chest. In sore throat this treatment is equally applicable.

Make use of the following electuary twice daily:—

R.—Extract of belladonna	...	3 drachms.
Dover's powder	...	4 drachms.
Powdered squills	...	1 ounce.
Treacle	...	A sufficiency to make of the consistence of good jam.

*Directions.*—Smear a piece about half the size of a walnut on the sides of the molar teeth or tongue as directed. Continue this treatment, with the addition of half an ounce of bicarbonate of potash in the drinking water, night and morning.

Keep the atmosphere moist by allowing a few pails of water to stand about; but this must not be allowed for drinking purposes.

Chronic bronchitis is very little benefited by medicinal agents.

## C

**Catarrh.**—Catarrh, or “cold in the head,” as it is sometimes called, is a

pretty common complaint amongst horses, especially during the change of seasons, or long spells of work in damp or wet weather.

Although a comparatively benign affection, it is one which, if neglected, is liable to end in a continuance of the nasal discharge, constituting one cause of *chronic nasal gleet*. There may or may not be a cough present, but there is always a discharge from the nose, and perhaps eyes, along with a loss of the usual vivacity and energy.

**Treatment.**—Throw the horse off work for a few days, clothe the body, and give warm soft food, but avoid liquids for 24 hours.

Steam the head with steam issuing from boiling water and bran, to which a tablespoonful of spirit of camphor and terebene has been added.

Oil of eucalyptus can be used instead.

**Chronic nasal discharge.** *See Nose*, discharge from.

**Cataract.**—This is a disease affecting the lens of the eye, or the capsule investing the lens, or both.

It is an unsoundness, and in the horse a cure is out of the question.

One or both eyes may be affected.

The sight, in course of time, becomes entirely lost.

By dilating the pupil with certain medicinal agents (atropine) a better view of the cataract can be got.

The candle-test is the best for discovering defects in the lens.

**Chorea, shivering, or St. Vitus' dance.**—In the horse this appears to be an incurable disease, and constitutes unsoundness. There is often a great difficulty in detecting it, because the animal may go for weeks without rendering evidence of being a “shiverer.”

We have seen horses badly affected with it at fairs, &c., which the seller has tried to conceal, either by turning the animal quickly, or employing some other stratagem. A simple “quivering” of the tail will, perhaps, be the only sign of the disease.

The muscles of the forearm are in some horses the locale of the affection.

The quivering of the tail can often be observed in the stall by causing the animal to pass from side to side numerous times, with the observer behind. If this fails, give the animal a drink of water, or (when convenient) drive it into a pool of water, watching the tail, &c., meanwhile.

**Cold.** *See* Catarrh.

**Collar-galls** (sore shoulders).—An ill-fitting collar is a common enough cause of sore shoulders.

Some horses are predisposed. To work a horse with collar-pressure whilst suffering from a gall thereon is a criminal offence, and renders the proprietor liable to prosecution. Horses predisposed to the affection can be worked with a breast-band. Another cause is that of fraying of the lining of the collar.

A good-fitting collar should have equal pressure all round the shoulders, without

squeezing the windpipe and blood-vessels. The traces should be attached half way up the collar.

As a lotion for collar-galls, the following will be found beneficial:—

R.—Subacetate of lead ...	... 1 ounce.
Powdered boracic acid ...	... 2 drachms.
Oxide of zinc ... ...	... 2 drachms.
Water ... ... ...	... 1 quart.

Mix, and apply several times daily.

**Colic, gripes, or belly-ache.**—This is, perhaps, the commonest complaint from which the horse suffers.

Although a horse with simple belly-ache may seem in a serious condition to the layman, it is an affection which readily yields to proper management, provided it is “colic,” not inflammation. The reader must understand that a simple attack of belly-ache implies severe pain in the horse, owing to the large size and extent of the bowels. Such pain is due to spasmodic contraction of the wall of the bowel at some particular part of its length. The writer’s opinion is that an ordinary attack of belly-ache never runs on to inflammation. There is nothing to show that such has ever happened.

The pain of belly-ache may continue for several days, and then subside. No one would induce us to believe that there had been the slightest touch of inflammatory activity present.

We have never had the pleasure of seeing a horse recover from inflammation of the bowels.

The only danger attachable to belly-

ache is that the animal may twist some part of the gut during its struggles through pain. In-foal mares must be prevented from rolling when suffering from colic.

**Causes.**—Sudden changes of food ; drinking cold water when over-heated ; abuse of purgative medicine ; worms ; impaction of the bowels with food material ; concretions moving from one part of the intestine to another ; and other causes.

**Treatment.**—At the outset we must condemn the too frequent practice of giving the anti-colic draughts of quack medicine vendors. Nothing could be absolutely more harmful, unless the vendor guarantees such free from physic.

To give a horse any kind of purgative medicine without knowing the cause of the belly-ache is to place oneself on the borders of Rubicon.

Supposing that you are certain that the pain is the result of indigestion or confined bowels, then by all means give a purgative, and let it be a good one, so that the bowels will freely respond to its action.

In every instance, the pain ought to be calmed ; for which purpose the prescription below will be found suitable :—

R.—Tincture of belladonna	...	3 drachms.
Chlorodyne	...	½ ounce.
Sweet spirit of nitre	...	2 ounces.
Bicarbonate of potash	...	½ ounce.
Hyposulphite of soda	...	½ ounce.
Water	...	½ pint.

*Directions.*—Give the whole at once.

After giving this, keep the horse walking about.

In one hour's time, if the pain be no better, give half an ounce of chlorodyne and one ounce of spirit of camphor in half a pint of tepid water. Massage the belly.

**Flatulent colic.**—This is much more serious than the last-named, because the animal may become so distended with gas that the heart's movements are stopped by the forward pressure of the midriff. The bowel or the midriff may rupture, though the mere fact of finding the latter ruptured after death does not say that such occurred whilst the animal was alive.

Active treatment is demanded. Four ounces of turpentine, blended with a pint of linseed oil, ought to be given at once, if no other drugs are at hand.

Keep the animal moving about. Send straight away for veterinary assistance, because it may be necessary to puncture the bowel, in order to let out the gas. The distension of the belly with the gas is sometimes so great that the horse may succumb before veterinary aid can be got. Always give the draught, however, and do not regret sending for the veterinary surgeon because the horse is well when he arrives. It might have been getting worse. The cost is nothing like the risk.

**Diagnosis of Colic.**—The pain is intermittent, *i.e.*, there are intervals of ease. The pulse is not altered when the pain is resting; although the horse may be sweating greatly, there is no anxiety about the face, no pinched expression, and the body does not assume a cold,

clammy feel, as happens in a fatal inflammation.

The after treatment consists of careful feeding.

**Consumption.** *See* Tuberculosis.

**Contracted Feet.** *See* Feet, contracted.

**Constipation.**—Some horses are predisposed to suffer from torpidity of the bowels, probably on account of the continued use of dry fodder.

A deficient secretion of bile leads to constipation.

Certain foods have an astringent or binding action.

**Treatment.**—Soft, moist food. If the animal leads an idle life, daily exercise ought to be given, so as to rouse up the liver functions. The tone of the intestines can be improved by the daily use of half a drachm of powdered nux vomica, along with one ounce of liquorice, given in the animal's food.

Constipation is a constant symptom of certain febrile conditions, *e.g.* rheumatism.

Foals are frequent sufferers. The waste materials (meconium) are naturally expelled by the purgative properties of the first milk (colostrum). To overcome this confined condition, inject two or three ounces of glycerine, and give one or two ounces of castor oil, along with two ounces of linseed oil.

**Corns.**—A corn constitutes unsoundness.

It usually appears upon the inner quarter (heel) of the fore-limbs. The immediate cause is a bruise.

A recent corn is denoted by a red star-shaped mark, but an old corn has a bluish-black appearance.

Sometimes a corn begins suppurating (suppurating corn).

In order to detect a corn the shoe must be taken off.

Lameness is often present.

The horse can be shod with a leather sole.

**Cough, chronic.** See Bronchitis.

**Crib-biting.**—This is a stable vice, and a very objectionable one.

A muzzle or concealed crib can be used. The animal may be kept in a place where there is no manger.

**Cracked Heels.**—The horse is frequently troubled with this complaint. It is the result of irritation through sand, wet, &c., and very often the fault of the groom.

Lameness arises through the sores cracking when the animal first leaves the stable.

**Treatment.** (1) *Preventative.*—If the groom does not dry the heels properly, forbid him washing them, but let the mud dry on, and then brush it off.

Some avoid clipping the hair off the legs.

(2) *Medicinal.*—Apply white lotion. See Lotions.

**Curb.**—Horses having over-bent or sickle-shaped hocks are predisposed to “spring a curb.”

What is a curb?—It is a variously sized swelling, three or four inches below the point of the hock.

How can one tell whether a horse is affected with curb?—Why, by looking at the part in profile.

What shall we see?—A slight convexity rising from the back of the bone.

Does curb cause lameness?—Yes, when it is forming, but not necessarily when formed.

Is it an unsoundness?—Certainly.

The treatment comprises firing, or the daily application of a little red blistering ointment.

**Cuts.** *See Wounds.*

## D

**Diabetes.**—In its commonest form, diabetes is characterized by the excessive outflow of pale or colourless urine, perhaps affecting a number of the same stud at one time. The excessive discharge from the urinary organs arises from disturbed digestive functions, probably brought about through feeding the animal or animals upon musty hay or oats, &c.

The abuse of diuretic (staling) balls, powders, &c., will also bring it on.

The diagnostic symptom is an excessive discharge of pale-coloured urine.

**Treatment.**—Withhold all liquids for about twenty-four hours.

Give one of the following balls night and morning—

R.—Resublimed iodine	...	2 drachms.
Iodide of potash	...	4 drachms.
Bicarbonate of potash	...	1½ ounce.
Powdered gentian	...	4 ounces.
Treacle	...	A sufficiency to make six balls.

Give as directed.

Of course the cause must first of all be removed.

**Diarrhœa.**—Colts and foals are the most frequent sufferers from excessive evacuation of liquid faeces. A distinction must be drawn between moderate and excessive purgation.

Over-acidity of the stomach is the usual cause of infantile diarrhœa, and it is only when treatment is directed against this hyper-acidity that one can hope to be successful in stopping the discharge.

A fairly common cause of diarrhœa in yearlings is a blood-sucking worm, known as “*Strongylus Tetracanthus*.” Sudden changes of diet, abuse of physic balls, exposure to cold, too much green food, and other special causes, are the chief factors operative in the production of diarrhœa.

**Treatment.**—Try to ascertain the cause, because be it understood that diarrhœa is but a symptom of disease or disorder.

In the case of sucking foals, give the dam half an ounce of bicarbonate of soda or potash, along with her food, twice or thrice daily.

To the foal, give a couple of ounces of castor oil, along with one drachm of laudanum. A few hours afterwards give it two drachms of bicarbonate of potash, repeating this every six hours. This powder can be given in a little milk.

Or one may, instead of giving the castor oil, administer a dose of grey powder—20 grains placed on the back of the foal’s

tongue. Afterwards use the potash powders previously recommended.

Adult horses affected with diarrhoea, either through the abuse or unexpected action of physic, or arising through exposure to cold, &c., may have half an ounce of chlorodyne and one ounce of tincture of catechu, and a quarter of an ounce of tincture of kino, administered night and morning, in a pint of wheaten flour gruel.

Sloppy diet ought to be withheld, unless it be of a binding nature.

Hard food of any description must not be given.

**Distemper of the horse (influenza).**—Long known by the terms influenza, pink-eye, bilious fever, &c., we have decided to give our readers a change of name—though not original—in connexion with this disease, which we have spoken of as “horse distemper,” and define as a *specific infectious malady, capable of spreading from horse to horse, but not to animals of a different species.*

In its simplest form it is characterized by a catarrhal discharge from the nose, general weariness, cough, soreness of the throat, and a rapid loss of flesh. The extreme prostration is one of the most marked features of influenza, whilst the internal temperature ranges from 103° F. to 105° F., more rarely higher.

Sometimes the lungs, liver, bowels, and joints become implicated, and this is the reason why the terms “chest distemper,” “bilious fever,” “rheumatic,” “influenza,”

&c., are often used. Pink-eye had its origin through the peculiar scarlet colour of the mucous membrane lining the eyelids.

Although a horse may have more than one attack of distemper, we believe that the occurrence is rendered less liable if the animal be exposed to infection.

During certain seasons influenza assumes an epidemical form; at others it partakes of the endemic nature, *i.e.*, the horses of one city may be largely affected, whilst adjoining cities know little of the disease during the particular season of its prevalence in a given locality.

Like distemper of the dog, this equine equivalent is always present in this country, though perhaps free from local or general distribution. Isolated cases are constantly occurring.

Spring and autumn are the times of the year when distemper is the most prevalent.

**Symptoms.**—Dryness and redness of the mucous membranes lining the eyes and nose, followed by a thin watery discharge, gradually thickening. The cough is at first dry and hard, subsequently becoming soft, moist, and oft repeated.

If pleurisy sets in the cough is hard, short, and suppressed, the latter being to avoid pain during the act of coughing.

Soreness of the throat is usually present—indeed, the cough may proceed from throat irritation. During the early part of the attack shivering fits are present, though these may escape careless

observation. Thirst, loss of appetite, and lying down to rest are constantly seen in influenza.

Internal temperature elevated several degrees, bowels confined, and a scanty secretion of urine.

Bilious symptoms are seen in some horses. The yellow colour of the "whites" of the eyes, inside of the cheek, and pallid mucous membranes elsewhere, are the chief indicators of liver implication. The pulse is soft and feeble. Diarrhoea or dysentery is inclined to prevail if the horse is situated where debilitating (bad drainage, darkness, &c.) influences prevail.

Bronchitis is a common complication, whilst pleurisy and lung inflammation are not infrequent.

Pleurisy is denoted by the short and painful acts of coughing, high temperature, and "sighing."

The pulse will be found beating at the rate of about eighty times per minute, and of a small, hard, and wiry nature. If dropsy of the chest comes on to any extent, the horse stands obstinately, breathes carefully, and dropsical swellings appear about the chest and limbs. A ridge will be seen running along the side of the belly. An important symptom of lung inflammation is the upward heaving of the back-bones.

A description of the rheumatic form will be found on reference to Rheumatism.

**Treatment.**—Place the animal in a clean, well-lighted and well-ventilated stable. Clothe the body. If a light

horse, bandage the limbs. In the event of the disease beginning amongst a stud, separate the diseased animal at once, and keep it alone. Then take the temperatures of the rest of the horses, and note the "rise" in any of them. Mark such as suspicious.

Having got out the diseased, disinfect the building with chlorine gas.

Good food and nursing are the best aids towards a favourable issue. To the animal's drinking-water add half an ounce of powdered nitre twice daily.

No purgatives or bleeding must be thought of. These would be subduing the horse—not the disease.

As a draught, we can recommend the use of the following every six hours—

R.—Sweet spirit of nitre...	...	1 ounce.
Sulphuric ether ...	...	6 drachms.
Concentrated acetate of ammonia ... ...	...	3 drachms.
Rectified spirit of wine ...	...	4 ounces.
Tincture of belladonna ...	...	2 drachms.
Water... ... ...	...	$\frac{1}{2}$ pint.

Mix, and give the whole at once.

If pleurisy is suspected, give half an ounce of tincture of perchloride of iron, along with half a drachm of quinine, in half a pint of water.

Repeat every six hours.

If the bowels are confined, a few—say four—tablespoonfuls of linseed oil can be added to a small bran mash daily, until the constipation has been overcome.

However, veterinary skill is always called for if the owner has reason for

suspecting the onset of this untoward complication, and it is not infrequent.

For the bilious form, thirty grains of calomel may be added to a diuretic ball.

If there is pain in the belly, give half an ounce of chlorodyne, two ounces of sweet spirit of nitre, and six ounces of brandy, in a pint of cold water.

Bran and linseed tea, steamed oats, carrots, &c., along with eggs and milk and a little brandy, will help to support the strength, and thus aid the depressed circulation to re-establish itself.

Tonics and mild exercise form the basis of convalescent aids.

**Dislocation of the knee-cap.**—The stifle-joint is made up partly by three bones, the one in front being a small gliding bone, known as the patella, or knee-cap. It may slip away from its proper articulating surface. The causes of this are variable.

**Treatment.**—Draw the limb forwards, and keep it in position by a cord around the neck. The stifle can then be blistered. This treatment is chiefly applicable to colts, and not when there is a fracture, &c.

A high-heeled shoe can be put on.

The most important matter is that of keeping the limb extended.

**Dropsy.**—Dropsy of the chest, beneath the skin, within the belly, and (exceptionally) of the brain, are the chief forms.

Dropsy is but the outward expression of disease somewhere else,

Heart disease, kidney and liver disease, are frequent causes.

**Dyspepsia.** See Indigestion.

## E

**Eczema.**—This is a non-contagious skin affection, characterized by congestion and the subsequent formation of vesicles. When these latter are mature they rupture, their contents drying upon the surface, forming hard tear-like masses. The disease can be either acute or chronic. The chronic variety is frequently seen upon the inner surfaces of the knee and hock, constituting the well-known mal-lenders and sallenders. It is on the flexor surfaces of the joints. Its technical name is “psoriasis.” Defective nutrition is probably at the bottom of the whole affair.

**Treatment.**—Give half an ounce of Fowler’s solution of arsenic in the food or drinking water night and morning. Apply tar ointment or chrysophanic acid ointment to the sore places every night.

If the surface is moist, use, in place of the ointments, a lotion composed of a drachm of creolin, one ounce of laudanum, and eight ounces of water.

Give good food, and plenty of it. Change diet. Continue treatment for several months.

**Elbow, capped.**—A common cause of this is constant bruising of the soft tissues at the point of the elbow through the heel of the shoe. It also occurs in unshod horses, or those at grass,

At the beginning, it is a serous abscess, but leads up to the formation of solid fibrous tumour. As a preventative, an elbow-pad can be worn.

The insertion of a seton does good, causing a gradual wasting of the swelling.

Another plan of getting rid of the tumour-like formation is by putting an india-rubber ring around the base of the swelling, the constant pressure of the ring causing the tumour to die (cutting off nutritive supply), subsequently sloughing away.

**Elbow, wounds of.**—A wound in this region may lead to, or produce at once, an open-joint (which *see*).

The movements of the hip sometimes exert a suction-like action, drawing air into the tissues beneath the skin (emphysema), causing distension of it.

If left quiet, the animal will regain its normal condition.

**Eyes, inflamed** (ophthalmia).—Inflammation of the mucous membrane lining the eyelids is not uncommon. The causes are variable, but a hay-seed, thorn, cold, chemical and other irritants are the usual agents in bringing it on.

**Treatment.**--Keep in a dark box, and apply a lotion composed of two drachms of Goulard's water to every eight ounces of cold water. Bathe the eye or eyes several times daily with this lotion.

If neglected, this disease may permanently damage the sight. It is not uncommon to find the clear portion of the eye opaque, the opacity as a rule dis-

appearing under appropriate treatment. If a foreign body is the cause, then the first thing is to remove it. Examine the eye very carefully. In one form of influenza the eyes are affected.

## F

**Farcy.** *See Glanders.*

**Feet, inflammation of.**—A very common affection, popularly known as “fever in the feet,” “founder,” and “laminitis.”

It is a disease more prevalent amongst the lighter breeds of horses, probably because the degree of concussion is greater; though be it understood that heavy draught-horses are not uncommonly affected with it.

One attack predisposes to others, repetitions of which are readily observed by reference to the feet, the wall of the hoof-horn becoming arranged in an irregular, ringed manner, whilst the sole assumes a flattened form.

The congestion of the feet often leads to a separation of the “sensitive” structures on the pedal-bone, from the “insensitive” laminae on the inner side of the hoof-wall. This allows the coffin-bone to descend; therefore it occasionally happens that the point of bone projects through the sole at the toe. The term “dropped sole” is applied to this part when it has taken on the flattened condition—usually the outcome of foot-founder.

**Causes.** — Concussion; exposure to damp or cold; change of inflammation or

congestion from some other part of the body, *e.g.*, lungs ; standing constantly on one foot through lameness in the other ; feeding on wheat, &c., &c.

**Symptoms.**—One, two, or all four feet may be affected, but the fore-feet are those commonly diseased.

The feet are hot and painful, which is rendered particularly evident when tapped with a hammer.

It is quite likely that the animal refuses to budge a step, and when compelled to do so propels itself forward (if disease is in fore-feet) by a dexterous manipulation of the hind limbs.

• The attitude is characteristic.

When all the four feet are participating in the diseased activity, they are bunched together under the body as much as possible, and the heat in them is greatly increased. The pulse is full and strong. The pain appears to be intense, the slightest movement causing the horse to shake from head to feet, perhaps falling to the ground for relief. The bowels are constipated, appetite lost, and thirst is considerable.

Fat, heavy draught-horses are those in which the malady assumes its worst form.

As a rule, laminitis is not a fatal affection, but its results are damaging.

**Treatment.**—After the animal has been got into the stable, have the shoeing-smith sent for to remove the shoes. This done, put on cold bran poultices, and keep these *constantly* cold.

In our opinion, every case of laminitis

should be treated at the outset with cold applications, and after twelve hours with hot ones, but considering the many drawbacks which these latter often entail, it is our intention to recommend the continued use of cold bran poultices. Experience has proved to us the fallacy—and even danger—of asking horse-keepers “to keep the heat up.” Such is often an impossibility. Cold is infinitely superior to *irregular* heat.

The shoes removed, poultices applied, the next thing may be that of trying to persuade the horse to lie down. If there is severe pain, and a short, deep, dry straw-bed has been provided, there need not be much difficulty in pushing the animal over. We do not advocate the use of slings for this affection.

A draught can now be driven.

R.—Powdered Barbadoes aloes ... 3 drachms.  
Hot water ... ... ... 2 ounces.

Add this solution to—

Tincture of belladonna ...  $\frac{1}{2}$  ounce.  
Bicarbonate of potash ... 1 ounce (dissolved in a little water).  
Linseed oil ... ... ... 12 ounces.

Mix, and give the whole at once.

Having done this, leave the animal in charge of a trustworthy attendant, and return in six hours to administer the draught as follows :—

R.—Sweet spirit of nitre ... ... 2 ounces.  
Tincture of aconite, B.P. ... ... 20 drops.  
Concentrated acetate of ammonia 4 drachms.  
Bicarbonate of potash ... ... ...  $\frac{1}{2}$  ounce.  
Water ... ... ... ...  $\frac{1}{2}$  pint.

Continue to repeat the medicine at

intervals of six hours, until recovery has sufficiently advanced.

Bleeding or the “exercise treatment” is quite uncalled for.

As recovery takes place, a little green food should be allowed, and daily exercise enforced, but not overdone. Give the latter on soft, wet ground.

Avoid putting to work too soon. Common-sense will be the best guide in the matter.

**Fetlock, sprained.**—This is denoted by heat, pain, and swelling.

Cooling applications, a bandage, and rest constitute the main features of treatment.

**Feet, contracted.**—One of the most fertile causes of this is that of paring away the frog (foot-pad) until it is hardly worthy of its name.

By all means give frog-pressure—the more the merrier, so far as the horse is concerned. The smith need not take the trouble to practise horn-carving at his client’s expense.

Narrowness or contraction of the heels constitutes unsoundness.

**Flatulent colic.** See Colic.

**Foot, pumiced.**—The hoof becomes elongated and flattened from above to below.

**Foot, punctured or pricked.**—Whenever this happens it is an accident demanding immediate attention.

A misdirected nail (through carelessness at times) may fall to the lot of the most skilful shoeing-smith. He takes

care to immediately withdraw such, but the injury is *done*. The wound, if neglected, begins to suppurate, and the horse is exceedingly lame and ill. It is the pent-up matter that causes all this mischief. If an exit is not given at the sole, the matter burrows its way out at the coronet (quitter).

Whenever a horse begins to go lame shortly after being shod have the feet thoroughly searched.

**Treatment.**—Pare out the seat of the puncture until the sensitive structures are seen. The matter must have drainage. Now put the foot in a poultice, give a dose of physic, and a few days' rest. Remove both shoes, of course.

**Foot, canker of.**—This is a very intractable disease, attacking the foot-pad and sole, emitting a most obnoxious odour.

Nothing short of an operation is the least use.

**Founder of the feet.** *See* Inflammation of these.

## G

**Gastritis.** *See* Stomach, inflammation of.

**Girth-galls.**—This is a common complaint amongst cavalry horses and young horses.

The saddle shifts forward, and the girth galls the back of the elbow and the sides. Careless saddling, big-bellied horses, dried sweat, &c., are all causes.

Remove the cause. The girth can be strapped back.

**Glanders and farcy.**—So far as the cause is concerned, these are identically the same diseases.

Both are due to a *specific germ*, known as the *Bacillus malleus*.

Glanders can be either *acute* or *chronic*—usually the latter.

Farcy answers to *both* these.

Glanders may end in farcy, or vice versa. Commonly *both* are present at the same time.

Farcy is denoted by the appearance of the so-called farcy “buds,” or “buttons.” It is the skin-form of glanders, though in reality the absorbent vessels are the most affected.

Both diseases are incurable, and scheduled under the Contagious Diseases (Animals) Act.

This Act compels the owner to report a “suspect” to the nearest local authority, with the least possible delay. If certification shows the affection to be either glanders or farcy, the animal or animals will be ordered to be destroyed straight away.

The new method of detecting glanders is by the injection of *mallein*.

Chronic glanders is denoted, in most instances, by a discharge from one nostril, usually the left, and the appearance of “punched”-out ulcers within the nose. There is a cough, and the gland or glands beneath the jaw are hard, fixed, and swollen.

Sometimes there is no visible ulceration within the nostril (occult glanders).

In the acute form there is a higher

degree of fever and a citron-coloured discharge from the nostrils.

In farcy, the limb swells, often to a great extent, and the vessels (lymphatics) are cord-like.

In the acute form the limb is very hot and painful.

The disease is capable of transference to man by inoculation, in whom it is an equally grave affection.

The utmost precautions are necessary when dealing with a glandered (or "suspected") horse.

Immediate isolation of the diseased is essential.

**Grease.**—This is a skin-disease, affecting the limb or limbs of the horse. As the name implies, the part affected has a sticky and greasy feel. The hind-limbs are often affected, and large grape-like formations take place. Thickening of the skin and tissues beneath often causes the lower portion of the limb to assume a most unwieldy appearance.

A soft or lymphatic temperament predisposes to grease.

Irritating discharges don't improve matters. A greasy limb causes the part to have an objectionable odour.

**Treatment.**—If grapy tumours have formed, these can be removed by burning them off with the actual cautery, *i.e.*, a hot flat-iron (blacksmith's shovel). When there is merely a slight greasy feel about the part, dust it over twice daily with equal parts of powdered boracic acid, lead acetate, alum, and kaolin powder. If an ounce of

each of these be used, 20 grains of carbolic acid can be added to the mixture.

Give an occasional diuretic ball, and plenty of green food.

Poultices are needed in some cases.

A bandage can be put on after the powder has been used.

Half an ounce of Fowler's solution of arsenic, given in the food twice daily and continued for three weeks at a spell, and then a mild dose of physic, will be found about the best means of getting rid of this nasty complaint. Repeat the arsenic in a few days after the purgative, and continue this line of treatment for three or four months.

Keep the diseased part very clean.

**Gripes.** *See Colic.*

**Grunting.**—Some horses will make this noise when an attempt is made to strike them. It is often resorted to for the purpose of ascertaining whether the horse is a "roarer," though grunting is not necessarily associated with any respiratory defects.

A horse may be sound, yet grunt.

## H

**Heart, fatty degeneration of.**—This is a diseased condition, and one which must be regarded as a sign of "under" nutrition, whereas fatty infiltration results from "over" nutrition.

Aged and worn-out horses are not uncommonly after death observed to have their hearts in this state.

The organ is pale in colour, soft, and flabby, with a greasy feel.

Here and there a fatty patch will be seen; less frequently one side of the organ is affected. A fatty patch on the right side predisposes to sudden death through rupture of the organ, fatty tissue being incapable of fulfilling the duties assigned to the muscular tissue composing the heart, which has been "replaced" by the fatty material. The liver may suffer the same change.

**Heart, fatty infiltration of.**—The heart may be entirely embedded in fat, and yet quite healthy so far as its intimate structure is concerned.

Very fat animals have often their heart in this condition.

So long as the deposit of fat does not interfere with the movements of the organ, there need be no fear of harm.

The oily material is simply poured in between the fibres (does not replace them).

**Heart, dropsy of.** *See* *Dropsy*

**Hock, capped.**—In ordinary parlance, this means any swelling situated upon the point of the hock, forming, as it were, a cap over this.

Playing over the point of the hock there is a flexor tendon (*flexor pedis perforatus*), the expansion of which forms a cap.

Now, between the tendon and the bone there is a lubricating membrane, while between the former and the skin there is a similar apparatus.

Either of these may be the seat of capped hock.

The "capping" of the hock may be formed out of the thickened skin, or tissues subjacent to this, to "dropsy" beneath the skin (commonest form of capped hock), dropsy between the bone and tendon, or disease of the tendon or the point of the hock. If the tendon, where it plays over the point of the hock.

**Causes.** — Some form of external bruising.

Very often capped hock is a sign of an inveterate kicker, but its presence may be purely of accidental origin.

In reality, it constitutes unsoundness.

When purchasing a horse, care must be exercised to avoid deception with reference to its origin.

**Symptoms.** — Look very carefully at the points of the hocks, standing a little to one side, when it will readily be observed. If the point or points of the hocks have just been bruised, then there will be increased heat, pain, and swelling. Not so with an old capped hock. When the disease is located in the tendon it has a very hard feel; on the other hand, dropsy beneath the skin and tendon confers an elastic resistance.

Lameness may or may not be present. Usually not.

**Treatment.** — Supposing that the injury has just happened, and that the tip of the hock feels swollen and hot, then

you must use the lotion, at once, as below :—

R.—Tincture of arnica	...	...	1 ounce.
Goulard's water	...	...	$\frac{1}{2}$ ounce.
Laudanum	...	...	2 ounces.
Water	...	...	1 pint.

Mix, and make a lotion.

*Directions.*—Apply the liquid to the hock four or five times each day, by means of a pad of tow soaked in it, and kept in position by the use of a flannel bandage, applied rather tightly. Rest, and the application of a high-heeled shoe, will assist matters towards a favourable issue. After the inflammation has subsided, try the daily application of equal parts of iodine ointment and red blistering ointment.

The above treatment must be persevered with for several days.

**Hock, inflamed.** *See Spavin.*

## I

**Indigestion.**—The horse is a frequent sufferer from digestive disorder, and no wonder when one comes to consider the disrespectful way in which some proprietors of this slave treat his digestive apparatus. By some, the horse's stomach is regarded as a corn-box, capable of being filled—distended—at pleasure; others go to the opposite extreme, believing that such substances as cabbage-leaves and straw will satisfy the demands of the economy. Both practices are equally pernicious ones; whilst under feeding, improper food, and irregular feeding are the main causes of the horse being so frequently the subject of digestive disturbance.

There is a disorder known as “stomach

staggers." This is acute indigestion. Its causes are dietetic.

**Symptoms.**—Pain in the belly (colic), indicated by restlessness, or rolling and rising. The pain is not continuous. It often happens that the horse has a staggering gait (hence the name), and seems sleepy (sleepy staggers), perhaps pressing his head against the wall.

The pulse under these circumstances is "slow."

Sometimes the pain continues in this way for two or three days, but the body never becomes covered with cold sweats (unless it is going to terminate fatally); the face does not assume the anxious expression seen in inflammation of the bowels, neither does the pulse take on a settled "wiry" feel.

**Treatment.**—Give a purgative, in order to rid the alimentary canal of irritating material. The following will answer:—

R.—Powdered Barbadoes aloes ... 6 drachms.

Dissolve in hot water... ... 6 ounces.

And add—

Tincture of belladonna ...  $\frac{1}{2}$  ounce.

Sweet spirit of nitre ... ... 2 ounces.

Bicarbonate of potash ... 1 ounce.

Water .. ... ... ...  $\frac{1}{2}$  pint.

Mix, and give the whole straight away.

Some people believe in blood-letting, provided the horse is a suitable subject.

Three or four quarts can be withdrawn.

Allow plenty of warm water to drink.

Mustard can be applied, as a paste, to the belly, but wash it off in a quarter of an hour. The pain and other evil symp-

toms will disappear as soon as the purgative has had time to act ; but do not leave the animal whilst it is in pain.

If the latter continues, give one ounce of tincture of opium, along with one ounce of aromatic spirits of ammonia, in half a pint of warm water.

Allow sloppy food. Feed carefully.

**Inflammation.**—Any portion of the body, either externally or internally, may become the seat of inflammation. The causes are either irritation or injury. Specific inflammations are those arising from special causes.

The cardinal signs of inflammation are heat, pain, redness, and swelling.

**Treatment.**—To subdue the inflammation (removing the cause whenever possible) and allay the pain. Cold applications in the early stages, followed by warmth.

Laudanum and belladonna (half an ounce of each, the latter as tincture) internally. Give the draught in water.

**Influenza.** *See* Distemper of horse.

**Intestines, inflammation of.** *See* Bowels, inflamed.

## J

**Jaundice.**—This is symptomatic of a diseased or disordered liver.

It appears to be the result of absorption of bile pigments and then subsequent distribution in the blood-stream throughout the body.

It is denoted by yellowness of the white portion of the eyeballs, saffron-

tinged mucous membranes, slow pulse, torpid indisposition, &c.

Pain, when the liver is pressed behind the ribs, on the right side. Sometimes there is lameness in the right fore-limb.

The dung is clay-coloured.

**Treatment.**—The so-called “biliary fever” is one manifestation of influenza.

In most instances, good results from thirty grains of calomel and one drachm of physic ball-mass. In the drinking-water add half an ounce of sulphite of soda daily.

If the bowels become too loose, stop the medicine.

No purging must be allowed if the congestion is an accompaniment of influenza.

A very useful agent is dilute nitric acid. Of this liquid two drachms can be added to a small bran-mash, night and morning.

**General management.**—Non-stimulating diet.

**Joint, open.**—The hock, fetlock, and knee are those most frequently punctured. When a joint is punctured, a glairy (white-of-egg-like) semi-fluid issues therefrom. This then is called “open joint.”

What is known as an open bursa is not so serious as an open joint. The last-named is often very stubborn to treat successfully.

It is not necessary that the joint be opened at the time of injury. Subsequent sloughing is capable of bringing this about.

**Symptoms.**—The joint and its structures around are acutely inflamed. This

is denoted by swelling, heat, and, if the horse is down, inability to rise will very likely be present.

Usually there is considerable systemic disturbance, demanding early treatment.

**Treatment.**—Let us suppose that the joint has just been opened and that it is the hock. What are we to do?

Put the horse in slings at once.

Apply cold-water fomentations (*see* these latter) to the joint, and at the end of each act lay on a pad soaked in oil of cloves. Put a bandage and tow tightly over the whole. Do not interfere with the wound for three or four days. It is an excellent plan to cover the pad—soaked in the oil of cloves—with iodoform gauze. A physic ball—not exceeding four drachms—may be administered.

It is very important not to tamper with the wound, because this would reopen the joint if it be healing. Again, care must be exercised in order to guard against infecting the wound.

Supposing that the injury is not a recent one, and that the joint-lubricant has been flowing out for some time? Under these circumstances, we think that the best plan is that of applying a smart cantharides blister over the swollen joint and all around the sore.

This treatment excites a more vigorous inflammation, whilst the increased swelling closes the wound.

**Stiff joints.**—The joints—particularly the knee and hock—may become sealed by deposition of bony matter around their

articular surfaces. This is termed “an-  
chylosis.” The ligaments often participate  
in the diseased activity.

Anchylosis (permanent fusion) of the  
vertebræ of the loins is not uncommon in  
old horses and hunters. In the latter it  
is a serious defect, whilst in both it pre-  
disposes to fracture in this region. The  
so-called occult (hidden) spavin is nothing  
less than fusion of the tarsal (hock) bones.

Anchylosis, wherever situated, must  
constitute unsoundness.

This stiffening commonly arises from  
an injury to the joint, especially at the  
knee.

A stiff-kneed pony will manage to do  
some kind of labour, and there is no  
pain, although it may be very lame.

## K

**Kidneys, inflamed.**—Inflammation of  
the kidney or kidneys is not a common  
disease in the horse, either as an “acute”  
or “chronic” affection. A blow over the  
loins, cold, abuse of diuretics, &c., will  
cause it.

**Symptoms.**—There is pain over the loins  
when the animal attempts to urinate;  
straining, perhaps pain in the belly (colic),  
and a urinous odour given off from the  
skin. If any urine is passed, it is only  
very small in amount and highly coloured.

**Treatment.**—Place the animal in a  
very warm stable. Clothe the body and  
bandage the limbs.

Apply mustard-paste to the loins,  
washing it off in about half an hour’s time.

Having done this, give the following draught :—

R.—Barbadoes aloes	...	...	5 drachms.
Tincture of belladonna	...	...	2 drachms.
Tincture of ginger...	...	...	$\frac{1}{2}$ ounce.
Chloric ether ...	...	...	$1\frac{1}{2}$ ounce.
Aqua ...	...	...	$\frac{1}{2}$ pint.

Mix. Dissolve aloes in water.

*Directions.*—Give the whole at once, and repeat every six hours, omitting the aloes.

An improvement is denoted by diminished pain and the flow of urine.

**Knees, broken.**—The term “broken-knee” is commonly employed to indicate any form of wound to the knee or knees, no matter whether such be the mere grazing of the skin, or one in which the joint is opened, or even the bones fractured.

Commonly, an injury to the knee is the result of a fall, the gravity of which is determined by the condition of the ground upon which the accident happens. The harder and more flinty the road, usually the greater the degree of injury.

Some horses—*e.g.*, “speedy cutters”—are very liable to stumble. Careless driving may cause the horse to fall; but we must never be too ready to lay the blame to the driver, because such accidents will, and do, often happen to the most expert horsemen and drivers.

**Symptoms.**—When the skin has been merely bruised there may be nothing but a little swelling to indicate this, with, of course, a slight degree of stiffness in the joint owing to the latter.

In other cases the tendons may be

exposed, the joint opened, or one or more bones fractured.

If this has happened there will be a thin glairy discharge issuing from the wound, the discharge being increased when the animal moves the limb. The glairy liquid is the so-called joint-oil. Its presence is always indicative of serious injury; in fact it points to one of the worst forms of "broken-knee."

When the bones of the joint are broken recovery may take place, but it is always, we believe, attended with permanent stiffening of the joint. Previous injuries to the knee or knees may show nothing but discolouration of the hair—darker than the rest, or one or two grey or white hairs.

**Treatment.**—If through "speedy cutting," attending to shoeing or the application of a boot must be the owner's first thought.

Bruises will gradually disappear themselves in two or three weeks, but deeper injuries may require a couple of months' rest for repair to take place. When the skin is simply bruised, use the following lotion three times daily:—

R.—Sal ammoniac	...	...	1½ ounce.
Common salt	...	...	2 ounces.
Methylated spirit of wine	...	...	6 ounces.
Cold water	...	...	1 pint.

**Directions.**—Soak a linen bandage in the lotion, apply it loosely around the joint, covering the whole with an ordinary flannel one.

Fasten the head to the pillar-reins.

If the skin is broken the first thing to be done is that of cleansing away any

dirt, grit, &c. Neglect of this might lead on to lockjaw. Having seen this properly done, dress the wound with creolin lotion (two drachms to every pint of cold water). Apply the lotion with a piece of tow and a bandage.

It is a very good plan to sponge the knee with the lotion for about half an hour night and morning.

In three or four days, substitute the following ointment for the lotion:—

R.—Iodoform powder	...	20 grains.
Boracic acid ointment	...	1 ounce.
Red oxide of mercury ointment	$\frac{1}{2}$	ounce.
Oxide of zinc ointment	...	$\frac{1}{2}$ ounce.

Mix. Apply twice daily on tow.

When the joint has been punctured it is advisable to apply a little pad of cotton-wool (steeped in oil of cloves) over the part from whence the glairy liquid is escaping. Do this every third or fourth day, but don't dress the knee any oftener than this under these circumstances.

The horse should be kept on the pillar-reins the whole time.

## L

**Labour, mare in.**—The mare may foal either in the standing or lying attitude. The immediate sign of commencing labour is that of pain within the abdomen. At the beginning the spasms are but slight and feeble, but as time rolls on they become stronger and more prolonged, until a final expulsive effort brings the foal into the world.

If the mare is standing, the creature

glides slowly down the backs of the thighs and hocks, the fall rupturing the cord.

In some instances the owner severs the cord with a knife, previously tying a piece of thin string around it.

A little bleeding is unimportant.

Before foaling, the mare should have a well-bedded dry loose-box set apart for her accouchement.

Noisy demonstrations of any kind ought to be rigidly avoided.

At first, perhaps the foal won't be able to stand, but it is not very long before getting the use of its limbs. It then begins to look for the teats.

The milk usually appears in the gland about the time of birth.

After foaling, the mare should be kept warm, warm food given, especially such of a sloppy nature.

The "cleansing" or after-birth follows the birth of the foal. It should never be allowed to remain beyond twelve to twenty-four hours. Its retention beyond the specified time is a source of danger. It requires the exercise of considerable skill for its removal.

The utmost cleanliness must be observed about foaling time.

**Lice.**—The horse is now and then the subject of a lice plague.

Poultry-lice seem to flourish upon his skin, and these vermin often come from this source.

The cause should, if possible, be done away with, and the animal dressed with the lime and sulphur lotion recommended

in the treatment of mange, or some other anti-parasitic agent.

**Lockjaw** (tetanus).—This is a specific disease, being caused by living germs, each germ having the shape of a screw-eye.

These germs are constantly present in the soil of certain localities. A trivial wound, such as a sore back, saddle or collar gall, puncture of the foot, &c., is quite as liable to be followed by the appearance of lockjaw as when the wound is deep or extensive.

At the best of times lockjaw is of grave moment, and a large number of deaths arise through it. Recoveries are not uncommon.

As no amateur would be likely to undertake the treatment of a case of this description, we consider it inadvisable to enter into a discussion of the symptoms and treatment.

One very important matter to bear in mind is that of preserving the most perfect quietude. Noises of every description aggravate this malady. Even the careless opening of the stable-door will bring on a spasm.

**Loins, strain of.**—Heavy draught-horses are those most liable to suffer injury in the region of the loins. A heavy weight falling on the back, or a heavy load, up or down hill, are both capable of producing strained muscles in this region.

The horse must have several months' rest, and the spine should be massaged daily.

A plaster of Burgundy pitch and rest in the slings constitute the rest of treatment.

**Lungs, congestion of** (pulmonary apoplexy). *See Pneumonia.*

**Lungs, inflammation of.** *See Pneumonia.*

**Lymphangitis, weed, or Monday-morning disease.**—This is a very common malady amongst horses working through the week, with a day of rest at the end of it.

The heavier breeds are very frequent sufferers.

The disease in its acute form is denoted by the sudden swelling of a fore or hind limb, commonly the latter, such swelling first beginning under the fore-arm, or upper and inner side of the thigh.

When the disease makes repeated invasions the limb becomes permanently enlarged, consequently unsightly.

If the swelling is hard, yet the inflammation acute, the pain is intensified.

The causes are twofold. The sudden cessation of work allows congestion of the lymphatic glands to take place. This is because the supply of lymph exceeds the demand—the machinery of expenditure being at its minimum.

The other factor is the ordinary quantum of food.

Weed, then, we consider is a congestion of the absorbents beneath the fore-arm or thigh.

**Treatment.**—1. *Preventative.*—Give half an hour's exercise on Sunday morning.

2. *Medicinal.*—Exercise freely. If bowels are confined, we must give a physic ball. Warm water can be applied to inner side of the thigh, &c., if needed.

By bandaging the leg the swelling can not be kept at the upper part.

A diuretic ball may be given on alternate days.

## M

**Madness.** *See Rabies.*

**Mallenders.** *See Eczema.*

**Mange.**—This is a parasitical skin disease, appearing upon the limbs, body, or both. It is very troublesome when a number of horses are affected at the same time, being a contagious disease, and in the Shetland Isles is scheduled as such. In every instance it is due to the transplantation of the parasite on to the skin. A pregnant female acarus or the ova (eggs) are equally fertile in producing the skin irritation which we recognize as "mange."

Three distinct varieties of these vermin attack the horse, the commonest bearing the technical name of *Sarcoptes equi*. The two others are known as *Dermatodectes* and *Symbrotes equi*.

The first-named attacks the neck, mane, chest, back, and tail. If the parasites are allowed to continue their ravages they will denude the body of its hairy covering.

Although always the result of infection—directly or indirectly—we believe that neglected or badly fed animals are pre-

disposed to suffer, or at any rate they form a suitable soil for the vermin to enjoy themselves. Being energetic, they are not long in making inflammation of the skin, though such is not easily seen upon certain parts of the cutaneous surface.

It must be understood that mange may happen in spite of good grooming, feeding, &c.

**Symptoms.**—If a number of animals are grazing, or stabled together, then the spreading nature of the malady is fairly good evidence that the affection is mange (parasitic mange).

The skin being irritable, the animal will be seen rubbing itself against various objects, such as gate or stall posts, &c. The hair falls off in patches, and the skin becomes dry and scurfy.

Loss of condition follows.

The diagnosis of course rests upon finding the parasite.

To do this, take some of the encrusted matter off one of the sores and examine them carefully with a powerful pocket-lens. The parasite will very likely be seen.

It does not matter whatsoever to the layman as to the variety of this, because the treatment is essentially the same for all.

**Treatment.**—If there is only one horse kept, then you must take him out of the stable in which he has been living, and dress the body and limbs very thoroughly with the following lotion :—

R.—Flower of sulphur	...	...	2 pounds.
Slaked lime	...	...	2 pounds.
Water	...	...	7 quarts.

Boil the mixture down until it measures one gallon. Subsequently filter, and use as directed above.

It is the best way to rub the lotion in with the hands; but before doing so we always wash the animal with soft soap, hot water, and Jeyes's fluid in solution, having previously—in the case of long-haired animals—clipped off the superfluous hair. This facilitates dressing. This is chiefly applicable to colts, &c., which have been out at pasture for some months. If the dressing is properly applied, it will kill the parasites—*i.e.*, the disease—within half an hour.

No portion of the body surface must be left untouched.

Having done this, the animal should not be allowed to return to the stable until the place has been thoroughly cleaned out with boiling water and soda lime-whitening the walls, &c., with hot lime.

In every instance the diseased must be kept separate from the healthy.

Dandy-brushes, curry-combs, chamois-leather, harness-padding, &c., must all have their share of attention in the general cleansing.

If proper measures are adopted the disease should be got rid of entirely in any stud within three weeks or so.

**Megrims.**—Vertiginous seizures coming on with apoplectic suddenness, usually whilst the horse is at work, and not

unattended with danger if there be any one riding behind the animal. It is thought to be most frequent in harness-horses, attributed to collar-pressure. The pressure exercised by a tightly fitting collar does undoubtedly prevent the free return of blood from the brain.

We believe, however, that animals with heart-disease are strongly predisposed to megrims.

It constitutes unsoundness, though its detection is impossible, as a rule, when a horse is examined for the latter by a veterinary surgeon. Its occurrence after certification by this authority would in no way render him liable for breach of faith. The horse usually shows no premonitory symptoms of the impending megrim seizure.

Sometimes the animal stops and falls to the ground, struggling at once, or it may remain in the standing attitude the whole time.

Perhaps the shafts will be broken in the act of struggling. The attack lasts but a short time, though the horse may injure itself during the struggle.

As such animals are unsafe, we must recommend that they never be used for the conveyance of human life.

By keeping the bowels open, feeding upon soft and easily digested food, the fits can be kept partly in abeyance.

If the horse is working in a collar, substitute the breastband.

During a fit, remove the pressure by drawing the collar upwards and forwards,

The seller of a horse affected with megrims is rendered liable for any injury arising from such.

**Mud fever.**—This term is applied to an affection of the skin denoted by a scurfy eruption, especially about the limbs and belly, subsequently upon other parts of the body, due to the irritating effects of mud upon it. It commonly results from bad grooming, mud being allowed to accumulate upon the skin.

Horses thus affected are hide-bound and unthrifty in appearance.

**Treatment.**—Add half an ounce of Fowler's solution of arsenic to the animal's drinking-water every night, and in the morning a powder composed of half a drachm of iodide of potash and 2 drachms of powdered nitre.

Each night give two tablespoonfuls of linseed oil in a small bran mash.

Allow linseed, carrots, crushed oats, and bran for food.

**Muscles, sprained.**—Any muscle during severe exertion is liable to be over-stretched, but perhaps their tendons are those commonly strained, consequently the flexors of the fore or hind limbs are often found to be hot, thickened, and painful, with the horse resting the limb. Sometimes the muscles under the loins are injured, in hunters, especially during the "drop." It may happen that the horse is unable to rise on the morning following the hunt.

In addition to this, there is a high degree of constitutional disturbance.

This accident is known as sprain of the psoæ muscles. It may end in an abscess.

Purgatives, an occasional warm clyster of barley-water, with an ounce of laudanum added, and hot fomentations to the loins comprise the chief rules for treatment of this injury, but skilled advice is necessary.

Recent sprains of the back-tendons are treated with warmth and moisture.

Apply a flannel bandage soaked in a cooling lotion as follows:—

R.—Methy.	spirit of wine	...	...	4 ounces.
Sal ammoniac	...	...	...	3 ounces.
Ice	...	...	...	$\frac{1}{2}$ pound.
Salt	...	...	...	3 ounces.
Cold water	...	...	...	1 quart.

Dissolve.

Over the flannel bandage apply another dry warm flannel bandage, taking care to use both evenly, thus allowing the pressure to be equable.

Chronic inflammation of the tendons is frequently treated surgically.

## N

**Nail-bound.**—This is a term applied for the purpose of denoting that one or more nails are driven too tightly home, the resulting pressure causing the animal discomfort, perhaps lameness. If suspected, remove the shoe and fasten not so tightly.

**Nasal-gleet.**—By this we mean a discharge from one or both nostrils, either of a temporary or permanent nature. In reality it is but a symptom of disease, and before attempting to cure this

condition an effort must be made to ascertain the cause of the flux.

**Causes.**—Disease of the upper or lower molar teeth; chronic catarrh (cold); inflammation of the mucous membrane lining the nasal and air chambers in connexion therewith; pus in the guttural pouches. In glanders, strangles, influenza, &c., a nasal discharge is common.

Ulceration of the nasal mucous membrane is a sign of glanders, so that care is necessary when examining a horse thus affected, in fact with any nasal discharge.

**Treatment.**—As already stated, an effort ought to be made to ascertain the cause.

There will be no difficulty in the case of a horse suffering from influenza or strangles.

Usually the nasal flux ceases when recovery has been completed.

The same may be said of acute catarrh. Steaming the nostrils with hot water and camphor will do good in the last-named.

Diseased teeth will require operative interference for their removal.

It may be needful to open the air-sinuses in order to wash the same out after the discharge has been allowed to escape.

A bulging of some part of the bone, and a dead sound when the bone is struck, indicates an accumulation of matter beneath.

The insufflation of iodoform powder daily does good when the discharge arises from prolonged inflammation of the nasal mucous membrane.

**Navicular disease.**—This is an incurable malady affecting the navicular bone, its cartilage, bursa, synovial membrane, and tendon gliding over its surface.

It is a very common complaint, and almost always confined to one or both fore feet.

Horses thus affected are vulgarly termed “groggs,” and their action is spoken of as being “groggy.”

The short catlike step is very characteristic of the disease, though this is not so evident if the malady is confined to one limb.

In order to destroy the pain arising from this affection, an operation known as unnerving (neurectomy) is frequently practised. This operation in no way does away with the disease—merely the pain.

An unwary purchaser may quite easily be taken in by having an unnerved horse palmed off as a sound animal.

So far as the purchaser is concerned, such an animal is worthless, though we do not say useless for work.

The nerves are divided in the hollow just above the fetlock joint, so that careful scrutiny at this seat is necessary. The presence of a slight scar here points to this operation having been performed. However, it is quite easy to confirm one's opinion by pricking the foot below this part. It (the animal) does not respond to the stimulus thus applied. In other words, sensation is lost after the nerve has been cut and a portion taken away.

**Symptoms.**—Pointing of the foot (shoe

worn at toe); lameness as soon as horse leaves stable, which may disappear after the animal has been trotted or warmed up a bit with work; upright pastern or pasterns; wasting of the muscles of the shoulder; wasting of the frog or frogs; absence of disease in other parts of the limb; pointing of the foot or feet when at exercise and in the stable.

**Treatment.** — Careful shoeing. Keep the toe short. The operation of neurectomy by a veterinary surgeon. Shoe with a leather sole. At its best, treatment is but palliative.

**Nettle-rash (urticaria).** — Nettle-rash is rather a frequent complaint in the horse.

It is characterized by the sudden appearance—and equally sudden disappearance—of numerous elevations upon the skin, varying in size from a three-penny piece to half-a-crown. It is attended with a considerable degree of irritation.

Although a comparatively mild affection, it is one which indicates disturbed digestion, and, it may be, nerve irritation.

**Treatment.** — Bathe the elevated patches with a solution of baking soda—one ounce to a pint of cold water. Anointing the places with zinc or boracic acid ointment is also useful. The same may be said of Goulard's lotion and white lotion. Internally, four drachms of aloes and twenty grains of calomel can be given, unless the bowels are loose enough. Add half an ounce of bicarbonate of

potash to the animal's drinking-water every morning and evening. Give a change of diet. Green food may be tried. A diuretic ball can be used instead of the powders, giving the last-named every other day for several days.

**Nose, bleeding from** (epistaxis).—Bleeding from one or both nostrils is now and again seen in the horse. Its occurrence has been noticed after an injury to the bones in this region. It may happen after the removal of a polypus. In a disease known as purpura haemorrhagica (*see this*) it is not uncommon. In addition to those named, there are other causes.

**Treatment.**—Syringe out the nostrils with warm and cold water (alternately).

## O

**Open-joint.** *See Joint, open.*

**Ophthalmia.** *See Eyes, inflamed.*

**Over-reach or tread.**—This is an injury to the band running around the top of the hoof, otherwise called the coronet.

Very commonly it is caused by the shoe of a hind-foot striking against it, sometimes through the habit of standing with one foot over the other.

Long fetlocks predispose to the injury. It is an unsoundness.

The coronet-band feels hot, looks inflamed, and causes considerable lameness.

**Treatment.**—Have the shoe taken off. Put the foot into a bath of hot (not too hot) water, and allow it to remain here for an hour or two.

Having done this, put on a warm bran and linseed poultice.

Continue this treatment until skilled advice can be got.

A tread may, if neglected, end in ring-bone or quittor.

## P

**Paralysis.**—The entire control of the body may be lost (total, complete, or general paralysis), or some particular member may become paralyzed (partial paralysis). Instances of the first are seen in azoturia (*see this*), and certain brain and spinal-cord affections. Paralysis of the eye, tongue, cheek, lip, bladder, bowels, and a fractured limb afford examples of local paralysis.

As a rule the causes of complete paralysis in the horse are very difficult to determine, just as difficult as it may be to ascertain whether the whole or only a portion of the body is paralytic, provided the paralysis is in connexion with the trunk. Old horses frequently become paralytic, though we believe that this is more correctly regarded as loss of power through—in many instances at least—sheer exhaustion, especially if the animal has been half-starved. Paralysis of the tongue, cheek, lips, and male generative organs are but rarely benefited by treatment.

The bladder may be paralyzed through over-distension with urine.

Fracture of one or more of the bones of the spinal column happens now and

again. There is complete loss of control and sensation behind the seat of injury. Diseases of these bones predispose to this accident.

Disease of the kidney is another cause of paralysis.

The treatment will entirely depend upon the seat and cause of the paralytic condition. Strychnine does good in some instances, but its use is only safe in the hands of the professional man.

**Parrot-mouth.**—The upper incisor teeth project in front of and over the lower incisors.

In "reversed" parrot-mouth, the lower incisor teeth project upwards and outwards in front of the upper incisors.

**Peritonitis.**—By the use of this term we imply inflammation of the delicate membrane covering the bowels. It is commonly associated with inflammation of the latter, and its course, symptoms, and treatment follow so closely bowel inflammation that we deem it inadvisable to enter into a discussion of the malady. (*See Bowels, inflammation of.*)

**Pink-eye.** *See Horse-distemper.*

**Pleurisy.**—The lungs are covered by a serous membrane known as the pleura. This may become inflamed, either alone or else along with the lungs. It often occurs during an attack of influenza. The danger of this disease chiefly lies in the tendency which there is towards the accumulation of watery fluid (effusion) within the cavity of the chest. If this happens, and the amount of accumulated liquid

is great, its withdrawal by operation becomes a necessity, though it may not be successful.

A short, suppressed cough; ridge running along the floor of the belly; hard, small, and quick pulse; high temperature, and sighing are the usual symptoms.

Dropsical swellings beneath the skin and difficult breathing point to the presence of liquid in the chest.

**Treatment.**—Mustard paste ought, in our opinion, to be well rubbed into the walls of the chest, and washed off in about a quarter or half an hour.

The body must be well clothed, and the limbs bandaged.

If necessary, the mustard application can be repeated.

The pain can be overcome by the use of morphia, preferably as an injection beneath the skin.

The average dose is 40 drops of the B.P. injection.

About 30 grains of opium in the form of a ball can be given with the same view.

When liquid begins accumulating in the chest the pain diminishes. This is not a good sign.

An ounce of sweet spirit of nitre and half an ounce of salicylate of soda, given in a pint of water twice daily, can be tried, before the watery accumulation takes place. In every instance we should recommend that professional advice be sought.

**Pneumonia.** — Inflammation of the lungs is a fairly common disease of the

horse. Its first stage is that of congestion or engorgement, and the second and final consolidation.

A sudden congestion of the lungs appears rather frequently amongst hunters which have not had proper preparation before the season begins. Over-heated and damp stables are capable of bringing it on.

It is probable that some forms of lung inflammation have their origin through the presence of germs.

If in a hunter in the field the disease is denoted by the animal coming to a sudden standstill, breathing rapidly, and having a small quick pulse—perhaps 100 per minute.

Anxious expansion of face and coldness of the body and beating of the flanks are additional symptoms.

**Treatment.**—Dismount, ungirth, and turn the horse's head in the direction of the most fresh air. Hand-rub the extremities. Half a pint of whiskey can be given to the same quantity of water, but the treatment is that of bleeding the horse. From six to eight quarts of blood should be drawn straight away. To neglect this is simply tampering with the animal's life.

Other forms of lung inflammation should be placed in the hands of the veterinary surgeon.

**Poll-evil.**—By this term we mean an abscess or suppurating sore upon the poll.

It is commonest in cart-horses and ponies working in coal-pits. At the beginning it is simply a bruise running

on to a watery swelling, the bursting being followed by infection and suppuration.

**Treatment.**—In the early stage cooling applications, in order to try and subdue the inflammation. If matter forms, the abscess will require lancing and then treating as an ordinary wound. The worst feature about poll-evil is the tendency for the pus to burrow between the muscles. If this happens it is necessary to operate, so that free exit can be given for its escape.

**Polypi, nasal, &c.**—A polypus is a pedunculated (stalked) tumour growing from mucous membrane. As a rule, the favourite places for these to grow upon are the membranes of the nose, rectum, vagina, &c.

Their removal, when accessible, can be effected by putting a piece of catgut around the base of the polypus. Bleeding is thus avoided.

Sometimes these tumours are composed of bone; then their excision is more difficult. The écraseur has been used for this purpose.

**Purpura hæmorrhagica.**—This malady occasionally follows upon influenza or strangles and other debilitating diseases.

It is denoted by the appearance of swellings upon the skin, especially about the head and limbs. In course of time sloughing begins, and dark-coloured blood oozes therefrom. Blood may also issue from the nostrils. The mucous membranes are covered with purple spots,

The treatment should be left in the hands of the veterinary surgeon.

## Q

**Quarter, false.**—A false quarter is a fissure or depression in the wall of the hoof, situated at the quarters.

It appears to result from a defective secretion of horn, brought about through an injury to the coronet. It is an unsoundness, predisposing to sanderack, owing to a weakening of the horny wall.

**Treatment.**—Remove the pressure off the wall at this part, through the use of an indentation in the shoe, or by paring a notch in the horn.

A blister to the coronet may be tried.

**Quittor, or fistula of the foot.**—This is a very common disease of the foot, either fore or hind, more frequently the former.

Its presence is indicated by the formation of one or more running sores around the top of the hoof, previous to the appearance of which the coronet is hot, swollen, and painful.

By far the commonest cause is a puncture to the sole of the foot, either through a misdirected nail during shoeing, or an injury inflicted in some other manner.

The original wound being closed up prevents the exit of matter, which now makes its way up the foot, finding it convenient to discharge itself at the coronet, which being tough but elastic, prevents the formation of a proper abscess,

therefore one or more sinuses or channels are formed instead.

These latter are quite incapable of drawing the matter completely away, so that chronic suppurating sores result.

**Treatment.**—1. *Preventative.*—When the foot has been punctured, have the part kept clean and dressed with an antiseptic lotion, such as creolin. If matter has begun to form, pare the foot (sole) well out, in order to give free exit to the discharge, which must be encouraged in its descent, through the use of some bran poultices.

2. *Medicinal or surgical.* — The fistulous sores must be opened to their depths, so as to convert each into a healthy healing wound. It is simply useless trying to heal them from the surface, because fresh sinuses will form at an adjacent part.

The so-called “bottoming” of the sinuses may often be attained by inserting a red-hot piece of wire into the depths of each fistula, though it is a painful process.

A radical cure can be effected by means of the removal of a portion of the cartilage (lateral cartilage) situated at the side and back of the hoof.

We would recommend this operation as being the best and least expensive in the long run.

Treads on the coronet must be treated by the use of cooling lotion, and then moist warmth after forty-eight hours. Rest is essential, and a mild dose of physic should have a salutary effect.

**R**

**Rabies.**—The horse has been known to suffer from this disease, and it is always the result of a bite from a rabid animal, usually a dog. It is a specific malady.

**Ranula.**—A ranula consists of a swelling beneath the tongue. Its precise cause is not well understood.

**Rheumatism.**—The horse is a tolerably frequent sufferer from rheumatism, though perhaps most frequently from the chronic form of the malady.

Foals are common sufferers from acute inflammation of the joints.

Again, influenza commonly assumes a rheumatoid form, particularly if the constitution be predisposed.

Repeated attacks of articular rheumatism lead to the permanent stiffening and enlargement of the part affected.

The most characteristic feature of articular rheumatism is its tendency to shift from one joint to another without the slightest apparent warning.

The joint or joints are hot, painful, and swollen. The fetlock and knee are common locales for this to happen in. Sometimes there is a high degree of fever (rheumatic fever).

**Treatment.**—A dry bed and warm, dry apartments are absolutely essential to successful treatment. Clothe the body well, and do not allow the least draught to enter the stable. To the swollen joints apply cooling lotion (never use fomentations of warm water or liniments in acute

attacks), such as iced water or sal ammoniac and saltpetre (1 ounce of each to a quart of water).

This lotion can be used by dipping lint into it, and then covering the whole over with a bandage soaked in vinegar and water.

Foals require the same treatment, so far as external applications are concerned.

Internally, give the animal the draught as follows, twice daily :—

R.—Salicylate of soda	...	...	2 drachms.
Iodide of potash	...	...	50 grains.
Bicarbonate of potash	...	...	$\frac{1}{2}$ ounce.

*Directions.*—The whole to be given at once.

To foals give the following powder thrice daily :—

R.—Iodide of potash	...	...	20 grains.
Dover's powder	...	...	5 grains.
Bicarbonate of potash	...	...	10 drachms.
Salicylate of soda	...	...	40 grains.

Mix. Give in eight tablespoonfuls of tepid milk. Get a dozen of these powders made at the chemist's.

For chronic rheumatism the best treatment is massage for half an hour twice daily.

**General management.**—Cold water to drink. Sloppy, but good food. Milk, with a dessertspoonful of carbonate of soda, can be given as a drink. Linseed and bran mashes. If the bowels are obstinately confined, give a clyster. To foals, two or three ounces of castor oil. A little green food, if possible.

**Rectum, protrusion and rupture of.**—Protrusion of the rectum is the result of straining, either during foaling, or else through constipation.

- Old age and debility predispose towards it. The protruded portion requires cleansing and then returning.

Rupture of the rectum is not very uncommon in the mare. In her it has been produced through false service, *i.e.*, per rectum.

A vigorous vaginal copulation has been said to have produced it, the pressure being brought upon the upper vaginal wall.

Pain comes on shortly after service. It appears to be always fatal.

**Ringbone.**—This is a bony enlargement upon the pastern-joint or a little above it. The first seat of disease confers the title of "low," and the second "high" ringbone. Both these can be detected, we believe, with the aid of the X-rays, though the usual method is by the sense of touch, and, when large, by the sight. As a rule, the ring of bone is incomplete.

It is the result of an acute inflammation of the covering of the bone and the bone itself.

Although ringbone may appear upon the fore limbs, it is usually upon the hind ones that we find it.

**Causes.**—A blow in this region is capable of setting up inflammation.

Concussion is said to be a frequent cause, whilst hereditary predisposition still holds its sway.

Lameness, when the inflammation is progressing.

**Treatment.**—Rest and the application of a bar shoe. Some people fire the part.

**Ringworm.**—A skin disease, caused by a vegetable parasite, of which there are two species.

The hair falls off, leaving a circular stubbly patch.\*

**Treatment.**—Wash and scrub the part with soft soap and hot water. Now rub in iodine ointment daily, or paint with iodine tincture.

**Roaring.**—This constitutes one of the worst forms of unsoundness, and is a very common disease.

Many handsome horses are perfect but for this defect. This is the reason why many high-class horses are doing cab or other menial work.

Although usually said to be an hereditary disease, it by no means follows that every "roarer" has received such as an inheritance—in fact, this is an indisputable truism.

Hereditary roaring is, so far as we know, incurable, the muscle of the larynx (voice-box) having undergone *fatty degeneration* through impaired nerve functions.

The muscular tissue is gradually replaced (destroyed) by fatty material. This is, of course, quite useless for the functions assigned to the replaced muscle. Hence a portion of the larynx remains paralytic, and it is this which interferes with the air supply to the lungs.

**Whistling** is a modification of roaring.

Tumours in the nostril, larynx, disease

\* In the other variety a honeycomb appearance is produced.

of the windpipe, are other causes of roaring.

If the morbid growth can be removed, then the roaring—as such is but a symptom of disease—can be cured.

Many horses work throughout their lives with an air “inlet” and “outlet” tube fixed in their windpipe—indeed, this is the best palliative for hereditary roaring.

It is the lighter breeds of horses that are the usual sufferers.

**Grunting**, when a feint is made to strike the horse, points to the animal being “touched in his wind,” though by no means must it be regarded as positive evidence without further trial. Put the horse to severe exertion.

**Ruptures.**—The commonest rupture is found at the navel in colts, foals, and fillies. This constitutes umbilical hernia. As a rule it disappears as the animal grows older. If not, an operation is called for.

Scrotal rupture is sometimes seen. The bowel passes into the testicular bag, and sometimes hangs down between the legs, if large. The danger rests in the liability towards strangulation of the bowel. An operation is needed.

## S

**Saddle-galls.**—These are produced by an ill-fitting saddle, and correspond to “shoulder” and “girth” galls, also carbine-bucket galls, shoe-case galls, sword-galls, &c.

Loss of flesh predisposes to saddle-galling. Careless riding, long rides, and

removing the saddle whilst the back is hot and wet, are amongst other causes.

If the injury is caused by the saddle, make a careful inspection when the saddle is on the back. The cause must be removed, and the injury allowed time to heal.

**Sallenders.** *See Eczema.*

**Sandcrack.**—By the use of this term we mean a split in the horn of the wall of the hoof. It is an unsoundness. Some horses go very lame through advanced sandcrack. Unless the split nips the sensitive structures on the front of the pedal (coffin) bone it causes no pain.

Sanderacks usually appear upon the “inner quarter” of the fore-limbs, and at the “front” of the hinder ones.

The split may begin on the inner or outer side of the wall, and extend through the thickness of the horn in either direction.

**Treatment.**—The main object aimed at is that of inducing a healthy growth of horn, from above to below.

Clasping the crack prevents further injury. The horse must not be worked if pain is induced.

**Seedy-toe.** — The horn at the toe assumes a mealy appearance. It is soft and devoid of tenacity. It may be that the toe-clip is causing it.

Remove the clip, if this is the case.

**Shivering.** *See Chorea, or St. Vitus' dance.*

**Shins, soreness of.**—Soreness, or inflammation, of the shins arises through

the effects of concussion, and is said to be commonest in racehorses.

A blow is capable of bringing it on.

It is an inflammation of the membrane covering the bone—cannon-bone.

Heat, pain, lameness, and swelling are the chief symptoms.

**Treatment.**—Rest, and cooling lotion to the inflamed part. If an abscess forms the matter must be allowed to escape. This is done by scarifying the part, but skill is necessary for this purpose, therefore it is advisable to consult a veterinary surgeon.

**Sitfast.**—By a “sitfast” we mean an indolent sore upon the back. There is a seat surrounded by a zone of dead tissue, or a tissue at any rate that impedes the healing process.

Excision of the dead tissue brings good results, but a blister can be applied around the sore. It is necessary to keep the animal off its work if a cure has to be effected.

**Side-bone.**—At the back of the coffin-bone two flexible pieces of cartilage are attached. These yield an elastic feel when the thumb is pressed against the upper and back part of the hoof, provided that they are healthy, but don't respond to this pressure if diseased.

Now, in side-bone we find that they have gradually become hard, and assumed a bony-like character. It is this which constitutes side-bone. Heavy horses are those usually affected, though in these the disease is the least objectionable.

The fore limb or limbs are the usual seats of the disease.

Never buy a light horse with side-bone. In any case, if it be decided to purchase the animal, the price must be reduced.

The chief cause appears to be concussion. During progression, the horse throws his weight upon the front part of the foot.

**Treatment.**—Rest, firing, high-heeled shoe, or operation.

**Sore-throat.**—This is a fairly common affection. It is often spoken of as “laryngitis,” and may be the result of a simple cold, or part and parcel of influenza.

The horse has a cough—hard and dry at first—difficulty, or complete inability to swallow anything beyond a little liquid.

The nose is poked forward, so as to relieve the pressure upon the upper part of the windpipe.

As soon as the cough becomes moist and soft, a free discharge from the nostrils takes place. This is a good sign. The discharge must be encouraged by the use of inhalations. The difficulty of breathing may become so great as to threaten suffocation ; if so, tracheotomy ought to be performed.

Fever and a hard pulse are other symptoms.

**Treatment.**—Apply turpentine liniment to the throat, beginning beneath the jaw and extending the rubbing down the course of the windpipe.

Mustard paste can be used instead ; but wash it off in about a quarter of an hour.

Swathe the whole of the head and neck with a flannel-lined hood, &c. Use the following electuary thrice daily, by smearing a piece about the size of a walnut on the inner side of the cheek :—

R.—Powdered chlorate of potash	1 ounce.
Extract of hyoscyamus	... $\frac{1}{2}$ ounce.
Powdered myrrh	... ... 1 ounce.
Powdered liquorice	... ... 1 ounce.
Glycerine	... ... ... 2 ounces.
Treacle	... ... ... A sufficiency to make the whole of the consistency of good jam.

Give soft or liquid food only.

**Spasms.** *See Colic.*

**Spavin.**—When the enlargement is of a bony nature, it is termed *bone-spavin*; if a distended vein at the part, *blood-spavin*; whilst inappreciable (though suspected) changes between the bones of the hock-joint give rise to the so-called *occult* (hidden) *spavin*.

*Bog-spavin* is a loose term, and can be used in connexion with any swelling of the hock.

Both light and heavy horses are equally subject to spavin.

It is spoken of as an hereditary disease when of a bony nature.

Strictly speaking, there is only one kind of spavin, and that is the bony formation, usually showing itself upon the inner and lower face of the hock, just at the head of the large metatarsal (cannon of hind leg) bone.

The spavin is really the outcome of inflammation attacking the covering of the bone here and the bone itself.

Nature endeavours to repair the injury by cementing the parts together with new bony material. In young horses this is usually completed, but in old worn-out animals the disease exceeds the reparative attempt. The *exciting* cause of bone-spavin is concussion.

How is one to detect a spavin?—Compare both hocks by the sense of touch. This is the best guide, though it needs experience.

Large spavins can be seen at a glance.

It may be asked, Is a spavined horse of little value?—Certainly not, so far as utility is concerned, unless the animal be damaged in other respects.

Cart-horses over five years, with good strong hocks, though spavin be present, are reckoned by some as good as an animal without the malady.

It is during the inflammatory stage—*i.e.*, whilst the spavin is being built up—that the animal goes lame. The free flexion of the hock, in horses of quick action, is, of course, necessarily diminished.

**Treatment.**—Rest during inflammatory process. Cooling applications to the inflamed hock. Dose of physic. Afterwards apply a good blister.

For the bony deposit, pyro-puncture or thermo-cautery is the best.

Blistering or firing, or both, and then turning out to grass, are common practices.

Occult spavin cannot be detected—unless the X-rays can do it. The rays prove an admirable means of detecting bony deposits of the horse, and perhaps

may be the means of settling many knotty arguments.

**Speedy-cutting.**—A speedy-cutting horse is one that strikes the inner side of the fore-leg (usually about the knee, or below this and the fetlock) with the shoe of the opposite limb.

Turned-in toes and high action are favourable towards speedy-cutting. It is a dangerous fault, and rightly constitutes unsoundness.

**Treatment.**—Rest; cooling lotion to the sore. Keep the foot narrow on the inner side, and the toe short. A three-quarter shoe can be tried.

A speedy-cutting gaiter may be used.

Various patterns are made for the purpose.

**Splint.**—A splint is a variously sized deposit (or deposits) of bony material upon the back of the cannon bone, and almost always affecting the fore limbs.

Horses of moderate or fast pace are those usually affected; heavy horses seldom.

Strictly speaking, splint constitutes unsoundness, though many able veterinarians would never dream of rejecting a horse for such, provided everything else satisfied them.

The deposit of bone may be rough or smooth upon its surface. A "simple" splint is a single deposit of bone; a "compound" when a number of bony deposits are present.

A splint near to the knee or upon the outside of the leg should always be con-

sidered most objectionable, and we think that no veterinarian would dream of advising any client to purchase a horse thus affected.

It is during the formation of the splint (*i.e.*, the deposit of bone) that the animal goes lame.

The chief cause is concussion, though a blow in this region is liable to cause the part to inflame and a splint result.

Splint lameness is characterized by the increase of such during exercise, especially if the horse be trotted on hard ground.

If the splint is in its formative stage there will be increased heat, tenderness, and pain when the leg is manipulated at the back of and between the knee and fetlock joints.

**Treatment.**—During the inflammatory stage rest is the first essential. Cooling applications. A high-heeled shoe may be put on.

The daily use of red blistering ointment will be found of some service.

Veterinary surgeons adopt other special forms of treatment for this malady.

**Staggers, grass.**—This is a peculiar form of disease seen at a particular season of the year, and said to be brought on through eating rye grass. Remove from pasture and give a dose of physic.

The complaint is indicated by a staggering gait.

**Staggers, stomach.** *See* Indigestion.

**Stomach, inflammation of.**—Vegetable and mineral poisons of various kinds are capable of causing inflammation of the stomach.

According to the nature of the irritant so must the treatment be.

The symptoms resemble those of inflammation of the bowels.

**Strangles.**—This is chiefly a disease of colthood and fillydom. In its simple and usual form it is denoted by the formation of an abscess beneath the jaw.

The swelling interferes with the free inlet and outlet of air.

**Treatment.**—Two courses are open to the owner. He may either order the swelling to be fomented or poulticed with hot applications, or he may apply a blister. We think that there need be little hesitation in recommending the latter.

The abscess, when ripe, can be opened or allowed to burst. Then keep the part open for a few days, dressing with an antiseptic.

Irregular strangles implies that the abscess is removed from its usual situation. This form is dangerous. Abscesses often form in connexion with vital organs.

**Stringhalt.**—This disease is denoted by the sudden catching-up of the limb. It is fairly common in the hind limbs. Both light and heavy horses suffer from it.

It is an unsoundness. Sometimes the

leg is held up for a considerable time, then suddenly dropped. So far as we know, it is incurable.

**T**

**Teeth, diseases of.**—The molar teeth are more frequently affected than the incisors. The grinding surfaces of the former are commonly the seat of irregularities and decay. This is particularly the case with old or aged horses.

**General symptoms of teeth affections.**—Loss of condition; quidding of food; or the presence of this latter in the mouth after the animal has finished its provender.

If the mouth is opened—which can be done by grasping the tongue gently with the hand—irregularities will very likely be seen, or if a decayed tooth or teeth be present, it will not only be seen but smelt—an odour not readily forgotten.

A decayed tooth may cause a discharge from the nostril or a fistulous opening may appear on the side of the jaw.

**Treatment.**—Decayed teeth, or a supernumerary tooth, may require removal, for which purpose the services of a veterinarian are indispensable. Any irregularities the layman can rasp off with the tooth-rasp, keeping the mouth open with a balling-iron (*gag*).

In the so-called “shearlike” mouth, it is the *inner* edge of the lower and the *outer* edge of the upper molars which

have their grinding surfaces worn away in a very oblique direction. Rasp down the irregularities.

Polishing of the grinding surface is incurable. Soft food is about the best means of keeping up existence.

Entangled teeth—a condition occasionally found during shedding of the temporary ones—call for the removal of the milk-tooth at the seat of entanglement.

**Tendons, sprained.**—Below the knee and hock joints the muscles above end in ribbonlike bands, known as “flexor” and “extensor” tendons, the functions of which are those of flexing (bending) and extending (stretching forward) the limbs. Now, any form of severe exertion necessitates extra strain being put upon the muscles to which these tendons are attached, or rather from which they come, consequently the belly or fleshy part of the muscle, contracting too powerfully, exercises undue tension upon the delicate fibres of its tendon, provoking in these inflammation, and perhaps rupture of some of the fibres. This commonly happens to the “flexors.”

**Symptoms.**—If the injury is recent there will be increased heat, swelling, resting of the limb, and pain upon manipulation.

After a time the tendon shortens, and the animal knuckles over.

“Breakdown” of the racehorse is due to rupture of the tendon fibres, either of one or both limbs.

**Treatment.**—In the early stage apply a cooling lotion, such as the following:—

R.—Nitrate of potash	...	...	2 ounces.
Sal ammoniac	...	...	3 ounces.
Common salt	...	...	1 ounce.
Spirit of wine	...	...	4 ounces.
Vinegar and water, each	...	...	4 ounces.

Mix, and make lotion.

*Directions.*—Make several folds of linen and soak it in the lotion, fastening it on with a linen bandage, over which a flannel one must be put.

The lotion must be applied four or five times every day.

If this treatment does no good in about forty-eight hours, try the following lotion instead:—

R.—Tincture of arnica	...	...	2 ounces.
Warm water	...	...	1 pint.

This lotion requires the application of “pressure” at the same time, so for that purpose we must make some even rolls of tow, dip them in the liquid, and apply the same evenly on each side of the sprained tendon.

Pad any depressions after the linen bandage is on, so as to get equable pressure upon the sinew. Now apply a hot dry flannel bandage. This must be done several times daily. It is an excellent plan to rub the tendon with the thumb and finger for about twenty minutes twice a day.

Supposing that the tendon is permanently thickened—either through sprain or rheumatism—then there is nothing better than firing or blistering, or if a young and useful horse, he may get his veterinary surgeon to perform an operation known as “tenotomy”—the object of which

is that of allowing the contracted tendon to relax through division of it.

Some horses will work very fairly upon soft ground if the shoes are made with a high toe.

**Tendons, contracted.**—Contraction of the flexor tendons in adult horses is usually the result of chronic inflammation in connexion with the tendon, either through sprain or rheumatism.

Foals are not uncommonly born with this defect, but it may come on from birth up to two years. Sometimes the little animal is rendered a complete cripple.

It is probably due to insufficient length of the flexors; or to over-length of the cannon-bone. Thoroughbred foals are frequently affected.

As a rule, the defect is obvious at a glance.

**Treatment.**—Put the foal on its back, and then place the knee against the fetlock-joint, at the same time extend the parts below this by means of the hands, so that the fetlock is brought into an oblique position.

Now put on a bandage of starch or plaster of paris. The latter bandage must be of cotton, about one and a half inch in width, with the powdered plaster laid over its length (one side only) before rolling it. Having done this soak the rolled bandage in cold water and apply, taking care to put on a dry bandage next to the skin before doing so. Do not apply the bandage too tightly, otherwise the

circulation of the blood in the foot will be impeded.

Common sense is the best guide with regard to this. If the operation has been successful the foal will begin to put weight on the limb or limbs. The contracted tendons in adult horses are often removed by the operation of dividing the tendon or tendons (tenotomy), but if both hind and fore legs are gone we would not recommend any one to have it done.

**Thrush of the foot or feet.**—This is a very common disease, especially where the stables and feet are allowed to harbour filth. The seat of the affection is within the cleft of the frog, from which an offensive but characteristic discharge issues.

The smell is sufficient to diagnose “thrush of the foot.”

Decomposing excreta lodges in or otherwise sets up inflammation in the deeper parts of the cleft, resulting in infection, followed by suppuration, *i.e.*, the discharge of pus. Decomposition of the discharge leads to the abominable thrush-like odour.

The hind feet are necessarily more frequently affected than the fore, but it is common enough in the latter.

As a rule, it is safe to regard it as a disease resulting from neglect.

**Treatment.**—1. *Preventative.*—Cleanliness.

2. *Medicinal.*—Put the foot into a bath of Jeyes's fluid (one part to forty parts of water), in order to cleanse it thoroughly.

This being done, dress the sore with the powder as follows—

R.—Calomel	...	...	...	$\frac{1}{2}$ ounce.
Powdered iodoform	...	...	$\frac{1}{2}$	ounce.
Powdered boracic acid	...	...	$\frac{1}{2}$	ounce.

**Mix.**

*Directions.*—Insert some of the powder well into the depths of the cleft, and then put a pignon of tow in, so as to keep the part dry.

Do this twice daily. It will soon cure it. Don't forget that cleanliness is essential to success, so that you must keep the feet cleaner and the stable likewise.

Straw bedding is preferable to anything else while thrush is present.

**Thrush of the mouth.**—Foals, and less frequently, we think, adult horses, are occasionally affected with inflammation of the membrane lining the mouth. In the former it is common when still sucking.

It would appear to be due to deranged digestion, but some authorities think that it is the result of a parasite. For the present purpose it makes little difference which of these views is the correct one.

**Symptoms.**—The foal will be seen to have some difficulty in sucking, which leads us to examine the mouth. We then find reddened patches on the cheeks and roof of the latter, with, perhaps, small blisters, or collections of grey material, the handling of which gives the hand a nasty smell.

In adult horses, blisters are seen upon the tongue, inside the cheeks, roof of the mouth, &c. These burst and leave a

nasty raw-looking surface, the marks varying in size.

Sometimes blister fuses with blister, producing large sores.

**Treatment.**—Borax and honey is suitable for the foal.

Smear a teaspoonful inside the mouth three or four times daily.

Give the mother half an ounce of bicarbonate of soda in her food or drinking-water twice daily, while the foal may have the following powder placed upon its tongue daily—

R.—Grey powder ... ... 40 grains.  
Bicarbonate of potash ... 4 drachms.

Mix, and divide into four powders. Give as directed above.

For adult animals, add two drachms each of chloride of ammonia, carbonate of soda, and hyposulphite of soda to the animal's drinking-water night and morning. Wash or gargle the mouth with a solution of common salt and tepid water twice daily. Continue this treatment until well.

**General management.**—Soft food. Keep clean stable. Fresh water. A little green food if possible; failing this, a few tablespoonfuls of linseed oil to a bran-mash twice daily.

**Thorough-pin.**—By this term we mean a swelling, or distension, at the upper and back part of the hock.

As the swelling can be made to appear at either side of the hock, pushed through as it were, it has in this way come to get its present name, derived from "through-pin."

Young horses with upright hocks are said to be particularly liable, but it is not at all uncommon in adult animals.

It is the capsular ligament of the hock joint proper (tibia and astragalus) which becomes distended with fluid.

**Signs.**—A swelling at the back and upper part of the hock, capable of being pushed from side to side, and without lameness or inflammation. It is only in exceptional cases that the former is present.

**Treatment.**—Paint the swelling daily with tincture of iodine, though it is doubtful whether it will cure.

Pressure is as good as aught else. Fill the hollow of the hock with pads of tow and put on an elastic bandage. Sometimes a thorough-pin truss is used. Puncturing the swelling has been tried, but is no good without it is repeated several times, at intervals of about six or eight weeks.

The cavity is washed out with iodine after the operation.

**Toe, bleeding from, in disease.**—Bleeding from the toe is certainly a very ancient practice; but whether it has been attended with the benefits accorded to it by some, we are rather sceptical.

Its use has been largely advocated by old writers—and some present ones as well—for the treatment of inflammation in the feet (founder here).

The horn is pared away at the toe until blood flows out. This is encouraged by soaking the foot in warm water for a few minutes.

**Tracheotomy.**—This is an operation performed upon the windpipe (trachea), for the relief of difficult breathing or threatened suffocation. A small tube is inserted.

Inveterate roarers often wear a tube throughout their lives, carrying on breathing (quietly) through the artificial opening thus produced.

Again in strangles, sore throat, or any swelling threatening to bring on suffocation, opening the windpipe becomes a necessity. In this way, the “tide of danger” may ebb away.

**Tuberculosis, or consumption.**—Like man and many other animals, the horse is liable to suffer from consumption, though we think much less frequently than the ox.

It is a germ disease, being caused by the bacillus tuberculosis (Koch's bacillus). It can be produced in the horse by injecting the cultured germs beneath the skin.

The germs are of very minute size, and contain in their interior little bright spots. These are surmised to be spores. The spleen (melt) appears to participate largely in this disease as it appears in the horse, producing in this situation tubercles or nodules containing the germs, upon the finding of which the diagnosis of the disease must rest.

Progressive emaciation is the most important symptom to the layman.

“Tuberculin,” injected beneath the skin by means of a fine syringe, is another,

but recent, means of diagnosing the disease.

**Treatment.**—This can be but palliative.

If the animal is of no special value, destruction is as economical as any plan we know of.

**Tumours.**—The word “tumour” can be employed to indicate any form of swelling, no matter whether such be hard or soft, situated either internally or externally.

Tumours, be they hard or soft, when situated in connexion with, or in juxtaposition to, vital parts, usually cause death, either in virtue of the pressure which they exert, or through the subsequent inflammation which they induce by reason of their rupture and acrid discharge.

Solid tumours situated externally, *e.g.*, capped-elbow, are usually amenable to surgical treatment. In most instances their removal is called for, either by ligature—*i.e.*, tying a string around their base—or by the knife.

In the former case, there is less bleeding, and it is one which commends itself as being the most suitable for the layman to adopt. The only additional treatment comprises keeping the wound sweet with creolin or Jeyes's lotion (two drachms to a pint of water), and protecting the part from further injury.

Warts and angle-berries can be removed by the same method.

**Polypi**—*i.e.*, pendulous tumours—within the anus or vagina are readily done away with by the application of a

piece of catgut tied tightly around the base of the polypus. The nostrils are occasionally the seat of these morbid growths. Sometimes they are composed of bone, though this is uncommon—in fact, it is incorrect to apply the term “polypus” to a growth of this description.

Malignant tumours are such as have a tendency to return after being excised. Under these circumstances, the excision of the tumour demands giving it a wide berth.

Abscesses must, when ripe, be opened. If preferred, an abscess may be allowed to rupture. It is better to open it.

## U

**Urine, incontinence of.**—By this we mean inability to retain the urine within the bladder, either through paralysis of the latter, disease of its walls, or irritability of its lining membrane.

Foals commonly are found to be passing urine through their navel opening. This is caused through a tube leading from the bladder not having become closed (which it ought to do before birth), in this way allowing the escape of the urine.

**Treatment.**—For the incontinence of adult animals, we must try and get to the root of the cause, then treat in accordance with this.

A ball composed of half a drachm of powdered nux vomica and 4 drachms of powdered gentian, with 2 drachms of linseed meal and treacle, given twice daily, will be found useful.

In the case of foals, the best plan is to throw the little creature, touch the open vessel with a bit of red-hot wire, and then blister around the navel with a little cantharides ointment. This will usually effect a complete cure in a few days.

**Urine, stoppage of.** — Inability to urinate does not necessarily imply that the secretion of urine by the kidneys has been “ suppressed.”

Stone within the tubes leading from the kidneys to the bladder, within this latter, or tube leading out from it, may offer mechanical impediments to the out-flow of the liquid.

Again, during such diseases as paralysis, colic, stranguary, &c., the animal is commonly unable to pass any urine, either through participation of the bladder in the disease, or owing to the horse being unable to place himself in position for urinating.

**Treatment.** — Try and find out the cause.

Suppressed secretion cannot last very long, the animal being liable to die from urine poisoning (*see Kidneys, inflamed*). Try and pass the catheter; if a male, a longer instrument is necessary.

The penis is withdrawn from its sheath with the left hand, the catheter cleansed in creolin lotion (two drachms to a quart of water) and then smeared with belladonna ointment. It is now introduced into the passage and allowed to glide slowly along until it reaches the bend of the pelvis. Here an assistant guides it

round with his hand, after which it will be found to go into the bladder without further obstruction. No force must be employed. If there is a stricture in the lower part of the passage (urethra) the passing of the catheter will, likely enough, do away with it, and so allow the flow of urine.

Stoppage of urinary secretion really demands immediate professional advice.

**Urine, blood contained in.**—The expulsion of blood along with, before, or after urination is a matter of grave importance in many instances, but, as a rule, less so in the mare, knowing it is not unlikely to have come from the reproductive organs.

It may be passed as bright red fluid blood, in the form of a clot, or in a state of solution. This latter is characteristic of a disease known as “azoturia,” in which affection the urine assumes the colour of coffee minus the milk.

When the blood comes from the kidney it will likely *succeed* the act of urination, but *precede* it if from the tube leading the liquid from the bladder.

**Causes.**—Injuries to the loins; stone in the passage; disease of the generative organs; disturbance of digestion, as in “azoturia.”

**Treatment.**—When no cause can be ascertained, give the following ball night and morning:—

R.—Acetate of lead	...	...	40 grains.
Powdered nux vomica	...	30 grains.	
Extract of gentian...	...	2 drachms.	
Linseed meal and treacle...	A sufficiency to		form a ball.

**V**

**Veins, inflamed.**—Either of the large veins in the neck are particularly liable to become inflamed, chiefly through the usage of a rusty or dirty fleam during the operation of bleeding. Bleeding several times from the same opening is another cause. Never do this.

**Symptoms.**—The lips of the wound in the vein look thick, red, and angry. There may be swelling around ; sometimes abscesses form.

**Treatment.**—If there are any abscesses, these must be fomented with warm water and then opened with a clean but sharp penknife or lancet.

Having done this, wash all around the wound with warm water, and then apply some fly-blister along the course of the swollen vein. Rub it in for about ten minutes.

Now fasten the head on the pillar-reins for twenty-four hours ; at the end of this time a little vaseline can be smeared on the blistered part.

Give green food or a laxative ball.

**Vertigo.** *See* Megrimis.

**W**

**Warbles.** *See* Saddle-galls.

**Warts, removal of.**—These are thickenings of the horny covering (epithelium) of the skin. They may be “simple” or “compound.” In the latter instance, a number of warty growths spring from one root-stock, as it were.

Their removal is best effected by tying

a piece of catgut around the base of the growth, allowing it to slough (die) away. There is no danger attached to this method. If very small, try painting them with strong nitre or acetic acid every third day.

When in the neighbourhood of the eyelids, acids must not be used. Lunar-caustic can be applied instead.

Another excellent remedy for the removal of warts is a lotion composed of 100 grains of chromic acid, added to an ounce of water, and painted on daily.

**Weaving.**—This is an acquired habit. The animal appears to be constantly shifting its head from side to side (weaving it). It seems to depend upon nervousness, because by carefully observing the horse, unknown to it, it will be seen to have ceased the movement.

**Weed.** See Lymphangitis.

**Whistling.** See Roaring.

**Wind, broken.**—This disease is somewhat frequent amongst horses, especially those used for heavy draught, though it may occur irrespective of breed, age, sex, &c.

Although the symptoms are mainly those of a respiratory affection, the disease is intimately associated with perverted or deranged digestive functions.

We believe that broken-wind results from changes in connexion with the principal nerve governing the stomach and lungs.

**Causes.**—Feeding on dusty hay or fodder; driving immediately after feed-

ing ; or through the constant use of bulky food. Never drive a horse just after feeding it, unless you wish it to become broken-winded. Greedy feeders are rather prone to suffer.

**Symptoms.**—There is a hollow, dry, short cough. Once this is heard, it is not easily forgotten. After feeding or drinking the cough can generally be provoked.

The breathing is characteristic.

“ Inspiration ” (taking in of air) is shorter than in health ; but “ expiration ” is double (double-lift). In the first part of the act the air is forced out *quickly*, but very *slowly* during the second part. Wind-sucking, and other minor symptoms of disordered digestion, are commonly present.

Broken-wind is, of course, an unsoundness in every sense of the word.

**Treatment.**—1. *Preventative.*—Feed carefully. Don’t work immediately after food has been given.

2. *Medicinal.*—Give soft food, and regulate the bowels with occasional small doses of linseed oil.

Half-ounce doses of Fowler’s solution of arsenic, given in the drinking-water daily or twice daily, will help to ward off the unpleasant symptoms.

A vessel containing tar at the bottom should be always used for the animal to take its drinking-water from.

This latter is very good for the purpose.

**Wind-sucking.**—Like weaving, wind-sucking is an objectionable practice, and constitutes unsoundness.

A wind-sucking horse gathers air in his mouth, swallowing it with a gulping sound. Irregular or insufficient feeding is, we believe, a cause.

Wind-suckers are predisposed to colic and other digestive disorders, likewise to broken-wind.

**Treatment.**—Feed regularly.

To the drinking-water add a couple of teaspoonfuls of bicarbonate of potash daily or twice daily.

**Wind, thick.**—Under the heading of this title we refer to a condition in which the breathing has become somewhat altered in its character, giving rise to coarse sounds, particularly during severe exertion.

Although coarseness of the breathing may be but of a temporary nature, we think that the term “thick-wind” is mostly limited to a chronic or permanent affection, such as chronic bronchitis, in which the inflammation has produced structural changes in the walls of the air tubes, either large, medium-sized, or small.

The treatment must be directed towards the disease upon which the abnormal sound depends.

**Wind-galls.**—The so-called “wind-gall” is a puffy swelling, usually appearing at the fetlock joint.

In reality it is not a wind (air) swelling at all, its contents being of a liquid or granular nature.

Either the fore or hind fetlocks may be affected.

The exciting cause seems to be hard work.

**Treatment.**—Irrigation with cold water for a quarter of an hour each day, followed by a good rubbing with iodine ointment.

Firing produces the best results.

**Withers, fistulous.**—It is not at all uncommon to find the horse suffering from fistulous sores upon the withers, and we must confess that, once the disease becomes thoroughly established, it is usually extremely difficult to cure.

This shows the importance of taking steps to check the complaint at the very outset.

Some horses are, through defective conformation of their withers, predisposed to suffer.

Commonly an ill-fitting saddle is the “exciting” cause, but a blow will cause it. It is not necessarily confined to saddle-horses, though they may suffer more often than others.

At the beginning the disease appears to be a mere bruising and inflammation of the tissues beneath the skin of the withers and lubricating pocket (bursa), on the upper surface of the lower bones of the neck, producing a form of abscess (serous abscess) containing a watery fluid.

It is the bursting (or opening) and subsequent infection of this which leads up to the formation of a running (suppurating) sore or sores.

**Treatment.**—The swelling requires opening, but care is necessary in order to

avoid infecting the part. Before cutting it open, wash the lancet in a strong solution of carbolic acid, Jeyes's fluid, creolin, &c. Clip the hair off around the sore, and then wash the skin in this region (over the sore as well) with the same antiseptic solution. After cutting the abscess open—which should be done at the lowest point of the swelling, so as to favour the free escape of its contents—wash the cavity out with a solution of corrosive sublimate and compound tincture of iodine, employing a glass syringe for this purpose. Three grains of corrosive sublimate may be added to every pint of water, along with a drachm of dilute hydrochloric acid and an ounce of tincture of iodine.

If fistulæ have already formed, then the services of a qualified practitioner are necessary. Setoning is useless so far as curing the disease is concerned.

The burrowing of matter, and perhaps disease of subjacent bony tissue, necessitates surgical interference.

**Womb, inflammation of.**—This is a very serious complaint, and one in which no time should be lost in seeking the most skilled advice obtainable.

It not unfrequently follows labour, either as the result of direct injury to the womb through surgical interference, or through a decomposing (putrefying) “after-birth” (placenta) being retained too long. This is particularly liable to happen during warm weather.

Never allow the “cleansing” to re-

main longer than twelve or twenty-four hours in a mare, otherwise it may cost her her life.

It requires careful separation from the wall of the womb.

After removal of the cleansing the womb ought to be washed out with a solution of corrosive sublimate, ten grains to a quart of tepid water.

Internally, a pint of linseed oil may be given, to which a couple of ounces of chloric ether has been added.

**General management.**—Green food night and morning.

Bran and scalded oats.

Half an ounce of chlorate of potash in the animal's drinking-water twice daily before food.

Strict attention to surrounding cleanliness.

Freely use Jeyes's fluid in solution, or carbolic acid in the same manner.

Clean bedding. Never allow food to lie about after a meal. Clothe the body.

Watch carefully for unfavourable symptoms—denoted by patchy sweating on the body, a rusty, mucilaginous discharge from the vulva, pain in the belly, and blood or dark spots upon the mucous membrane lining the eyelids (conjunctival membrane).

**Worms.**—Three distinct forms of internal parasites are found infesting the horse and ass. These are—

(1) The flat or fluke-like worms (trematodes), uncommon in this animal, found now and again in the bile passage.

(2) Round worms (næmatodes).

(3) Tape-like worms (cestodes).

Both the latter are very commonly found in the intestines both large and small.

There is also an "encysted" form of parasite occasionally found in the liver, &c.

#### ROUND WORMS.

Amongst these there is the so-called "pin" worms, found within the rectum. The irritation produced by these parasites often causes violent kicking.

To dislodge the parasites give an injection of turpentine, warm water, and salt. About half a teacupful of turpentine and a couple of handfuls of salt, added to three quarts of water, will answer the purpose.

The four-spined strongyle (*Strongylus tetracanthus*) is not uncommon, especially amongst colts in the fen lands. It is a true blood-sucking worm, causing loss of flesh, pain in the belly, diarrhoea, and gradual wasting of energy. At one period of its life-history it is coiled up in the wall of the gut, and can be seen shining through when a portion of the latter is exposed to the light.

It is not an uncommon cause of inflammation of the bowels. Other worms may be present along with these. It is bright red in colour, and in this way easily distinguished from the other varieties.

It sometimes causes perforation of the gut wall.

**Treatment.**—Change from pasture to

a warm and clean stable. Allow pure water. Give the best of food, though in small quantities. A tonic treatment must be carried out. Give half an ounce of powdered gentian and two drachms of powdered sulphate of iron, mixed together in the food night and morning.

Add linseed to the food.

Bran, scalded oats and carrots (boiled), are as suitable as aught else in this way. Serious losses often occur through these parasites.

If pain and diarrhoea are present then give half an ounce of chlorodyne night and morning along with a pint of wheaten gruel.

Burn the excrement and avoid pasturing animals where the colts have been grazing.

A very common—indeed the commonest—large round worm of the horse is *Ascaris megalocephala*, chiefly locating itself in the small bowel, though not necessarily so. It is a spindle-shaped worm with transverse stripes of the same colour (cream). The sexes are distinct.

**Treatment.**—Each evening give one of the following powders :—

R.—Santonin	...	...	...	6 drachms.
Powdered quassia	...	...	3 ounces.	

Mix, and divide into six powders.

**Directions.**—Give one powder about six o'clock, before feeding, and then three hours afterwards a bran mash.

The powder must be mixed with a small bran mash, and four tablespoonfuls of linseed oil can be added as well.

Maw worms are pretty common in the stomach. They don't seem to do much harm. Again, thread worms (*filaria*) are now and again found in the eyeball and its coverings. Others are found between the eyelids and eyeball. For the removal of the former "puncturing" is recommended.

#### TAPE WORMS.

Several of these are very common in the horse. *Tænia plicata* is often three feet in length, whilst *Tænia perfoliata* averages two inches or thereabouts.

The first is found in the small bowel, and the second within the large.

**Treatment.**—Turpentine, given in doses from one to two ounces along with a pint of linseed oil, is a good enough remedy. A dose of aloes should be given afterwards. It can be repeated in twenty-four hours. Repeat in a few days' time.

**Wounds.**—These are commonly spoken of as solutions of continuity, and in accordance with their nature are usually known as—Incised (clean cut), punctured (stabbed), lacerated (torn), poisoned, gunshot, &c.

The region of the injury is an important matter.

Wounds in the neighbourhood of the chest and belly are specially liable to be followed by serious consequences.

A large wound is not necessarily a sign of its gravity. Trivial wounds in the region of the feet are often fatal, less

frequently those about the mouth. Much depends upon circumstances. Wounds may be either accidentally or artificially inflicted.

When a bone is fractured, in addition to the wound, the gravity of the injury is proportionately increased. The same may be said when an artery is wounded. Depreciation of value usually results from an injury to the knee (wrist in man), usually spoken of as "broken-knee."

**Treatment.**—Superficial wounds can be painted with a solution of gutta-percha or else friar's balsam.

Slight injuries to the knee can be treated in the same manner. When the wound is about the eyelids, nose, cheek, &c., it ought to be carefully stitched up.

A curved needle is the most suitable for this purpose, and it should be threaded with silver wire or cat-gut, &c.

The stitches must be taken separately, *i.e.*, interrupted. If wire is used it should be thin, especially if the injury is upon the eyelids. Further, the stitches must not be drawn too tightly together, but a sufficient "grip" must be taken. In this way a wound can, if neatly sewn up, often be got to heal straight away. Never sew up a wound upon the surface of a joint, *e.g.*, knee or hock. The stitches are almost certain to be torn out when the animal flexes or extends the same.

Deep wounds upon the buttocks, &c., require button sutures, *i.e.*, flat pieces of metal (notched) to fix the threads to, so that the tension is exercised upon the

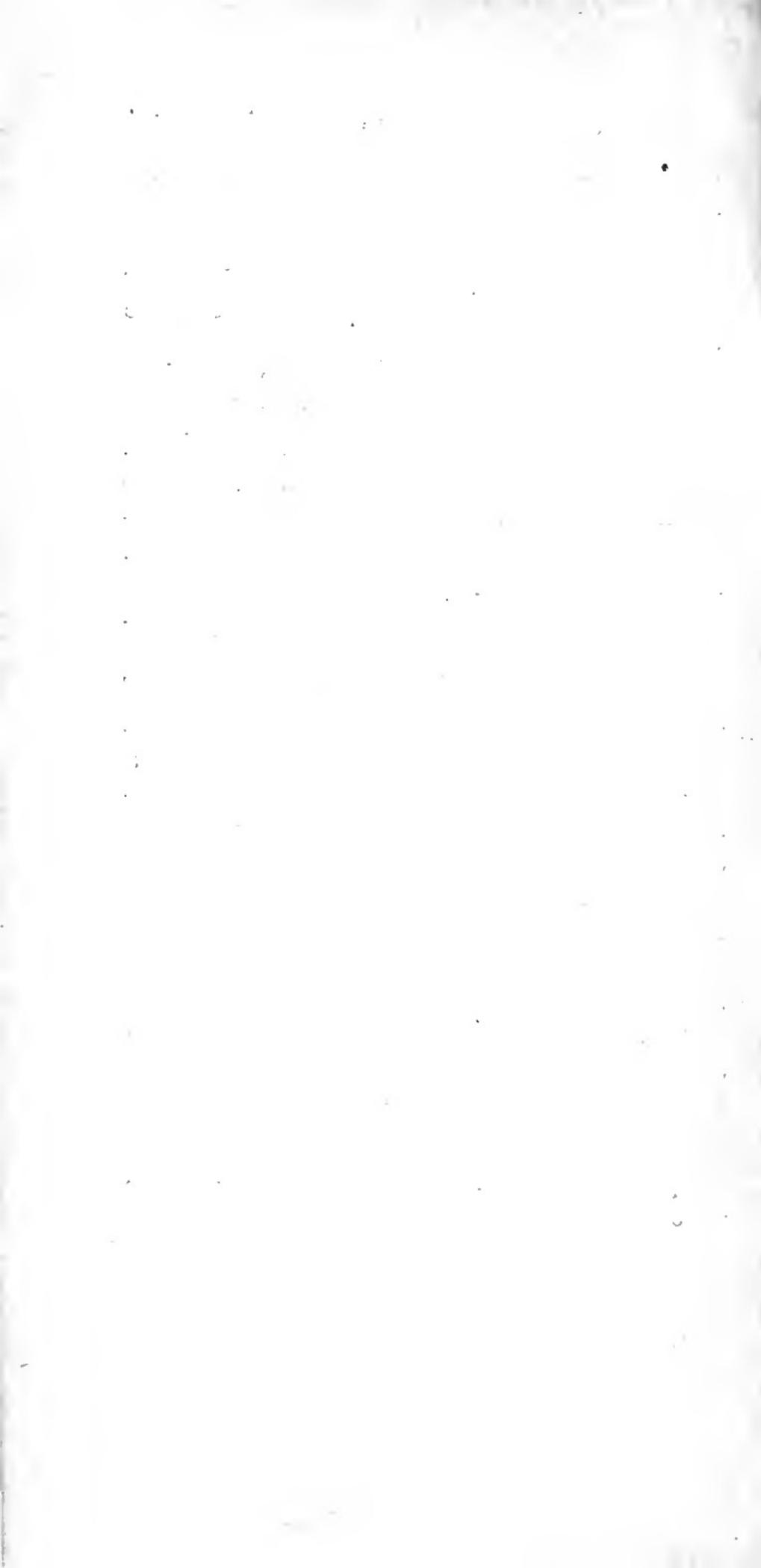
button, thereby preventing the suture from being torn out of its place.

Contusions, *i.e.*, bruising beneath the skin, demand cooling applications at the outset. A fuller's earth poultice can be tried.

When there is a broken bone in addition to the wound the latter ought to be left uncovered with the splint bandage. It should be dressed with iodoform powder and then covered up with gauze, gutta-percha, or tissue, and a bandage over all. Dress the wound daily.

Punctures of the feet demand the immediate removal of the shoe; the foot (sole) pared so that the injury is "bottomed," and, if festered, to allow the free drainage of matter. If this be not done, a "quittor" (fistula of the coronet) commonly results. Having done this, put on a good hot poultice, give a mild dose of physic, and allow the horse a few days' rest. Then shoe with a leather sole.

Many veterinary surgeons now use a substance termed "anti-tetanin." This they inject under the skin. It is regarded as a preventative against lock-jaw (tetanus), hence the name. It corresponds to the anti-toxin, now used in the treatment of diphtheria in the human subject.





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